

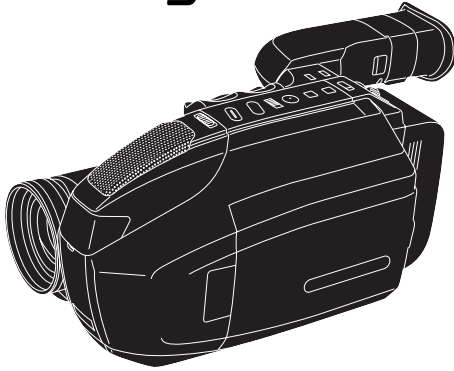
Service Manual

Palmcorder® **VHS**

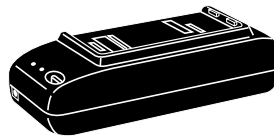
Compact VHS Camcorder

PalmSight™

PV-L759
PV-L779
PV-L859



MODELS: PV-L759D/ PV-L779D
PV-L859D



MODEL: PV-A17

ITEM	SPECIFICATION	1	2	3	ITEM	SPECIFICATION	1	2	3
Power Source	Compact VHS Camcorder: DC 6V AC Adaptor: 110/120/220/240V AC, 50/60 Hz Battery: Nickel-Cadmium Type DC 6V	○	○	○	Pick-Up Device	One integral color filter Charge Coupled Device (CCD)	○	○	○
Power Consumption	Compact VHS Camcorder: 6V DC 8.5 W (Max. 11.5 W) AC Adaptor: 24 W 1.2 W (when not in use.)	○	○	○	Lens	26 : 1 zoom lens, F1: 1.6 with auto iris control Focal length: 3.8 mm - 98.8 mm (4.5 mm - 117 mm: When recording.) (43.2 mm - 1123.2 mm: When converted to a 35 mm still camera.) 4 speed power zoom function Lens filter diameter: 49 mm	○	○	○
Video Signal	EIA Standard (525 lines, 60 fields) NTSC color signal	○	○	○	Viewfinder	0.5 inch (12.7 mm) Electronic Viewfinder 0.5 inch (12.7 mm) Liquid Crystal Color Electronic Viewfinder	○	○	-
Video Recording System	Head: 2 rotary heads plus flying erase head. Helical scanning system 4 rotary heads plus flying erase head. Helical scanning system Signal-to-Noise Ratio: SP: more than 43 dB SLP: more than 41 dB Horizontal Resolution (Color/Monochrome) Recording: more than 300 lines Playback: more than 230 lines	○	-	○	LCD Monitor	4.0 inch (101.6 mm) Liquid Crystal Display	○	○	○
		○	○	○	Memory	2 MB CompactFlash Card	○	○	○
		○	○	○	Image Size	FINE: 640 x 480 pixels Normal: 320 x 240 pixels	○	○	○
		○	○	○	Image Storage	FINE: Approx. 15 images Normal: Approx. 60 images	○	○	○
Audio	Head: Normal Mono: 1 stationary head MIC Input Level (M3 type) - 70 dB Frequency Response: Normal Mono: SP: 100 Hz - 8 kHz SLP: 100 Hz - 5 kHz Signal-to-Noise Ratio: Normal Mono: SP: more than 42 dB SLP: more than 40 dB	○	○	○	Image Format	JPEG	○	○	○
		○	○	○	Minimum Illumination Required	2.0 lx (F1: 1.6) 0.20 footcandles 10 lx (F1: 1.6) 1.0 footcandles (EIA Standard)	○	○	○
		○	○	○	Operating Condition	32°F (0°C) - 104°F (40°C) (Temperature) 10% - 75% (Humidity)	○	○	○
Tape Speed	SP: 1-5/16 i.p.s (33.35 mm/sec), SLP: 7/16 i.p.s (11.12 mm/sec) Record/Playback Time: SP: Max. 30 min, SLP: Max. 90 min, with TC-30 Tape FF Time: Less than 7 min. (TC-30 Tape) REW Time: Less than 4 min. (TC-30 Tape)	○	○	○	Weight	2.4 lbs. (1.09 kg)	○	○	○
Tape Format	Tape width 0.5 inch (12.7 mm) high density tape	○	○	○	Dimension	4-1/4" (107 mm) (W) X 4-5/8" (118 mm) (H) X 7-1/8" (180 mm) (D)	○	○	○
Pick-Up System	Sequential color difference field reverse system	○	○	○					

1. PV-L759D (Compact VHS Camcorder)
2. PV-L779D (Compact VHS Camcorder)
3. PV-L859D (Compact VHS Camcorder)

Weight and dimensions shown are approximate.
Designs and specifications are subject to change without notice.

Regarding the Service Manual of the AC Adaptor for model PV-A17, please refer to the Service Manual / Order No. MKW9512M302.

Panasonic®

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WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Use Marks shown in the chart below to distinguish the different models included in this Service Manual.

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
NOT USED	Z

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Note: AC Adaptor used with this Camcorder is PV-A17.
The Service Manual for AC Adaptor (PV-A17) is a separate volume.
Please refer to following manual for PV-A17.
Order number for AC Adaptor is PV-A17:

MKW9512M302.

REPLACEMENT PARTS LISTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:

REPLACEMENT NOTES

General Notes

1. Use only original replacement parts:
To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.
2. **IMPORTANT SAFETY NOTICE**
Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components, use only the specified parts.
3. **SPECIAL NOTE**
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.
4. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.
6. Parts with mark "VED" in the Remarks column are supplied from VED. Others are supplied from MKE.

Mechanical Replacement Notes

1. Section No. of parts shown in Exploded Views are indicated in the Remarks column.
2. Abbreviation
RTL: Retention Time Limited
This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
3. Cut Washers (Ref No. 409, 411, and 419) are not reusable. If removed, install a new one.
4. Head Amp C.B.A. which is located on the Lower Cylinder is supplied as a Cylinder Unit only.
However, IC3501 (AN3365SB or AN3368SB) is available separately as a replacement part.
5. After replacing Mechanism Cassis Ass'y (Ref. No. 49) or Mechanism Chassis Sub Ass'y (Ref. No. 213), perform the "Tape Interchangeability Adjustment" procedures, pages 2-38 to 2-41.

Electrical Replacement Notes

1. Item numbers with capital letter E (Example: E1, E2,...) in the Ref. No. column are shown in the exploded views. The E item numbers are also printed on the same page at the top of the column.
2. The parts with "■" mark are supplied individually or as a unit. The parts with "▲" mark are supplied individually or as a unit, and are included in "■" parts listed directly above in the parts list.
3. Unless otherwise specified;
All resistors are in ohms, 1/4W, +/-5%, carbon, K = 1,000 ohm, M = 1,000 kohm.
All capacitors are in microfarads, P = micromicrofarad, +/-10%.
All coils are in microhenries, M = 1,000 microhenry, +/-10%.
4. Abbreviation
RTL: Retention Time Limited
This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
NR: Non Repairable Board Ass'y
MGF CHIP: Metal Glaze Film Chip
C CHIP: Ceramic Chip
COMPLX CMP: Complex Component
W FLMPRF: Wirewound Flameproof
C.B.A.: Circuit Board Assembly
P.C.B.: Printed Circuit Board
E.S.D.: Electrostatically Sensitive Devices
5. SERVICE OF CHIP PARTS
When servicing chip parts, please use a soldering iron of less than 30 watts. Refer to "IC, TRANSISTOR AND CHIP PART INFORMATION" page.
6. The parts with "●" are 0 ohm resistor. When replacing, a wire can be substituted for a 0 ohm resistor.
7. Lamp Kit (E41) replacement note:
Lamp is supplied as a Lamp Kit only (Kit No. VULS0001) which contains Lamp, Cushions, and Explanation Sheet.
8. IC305 replacement note:
When replacing this IC, be sure to write the initial data with PC-EVR Adjustment Program.

COMPARISON CHART OF MODELS & MARKS

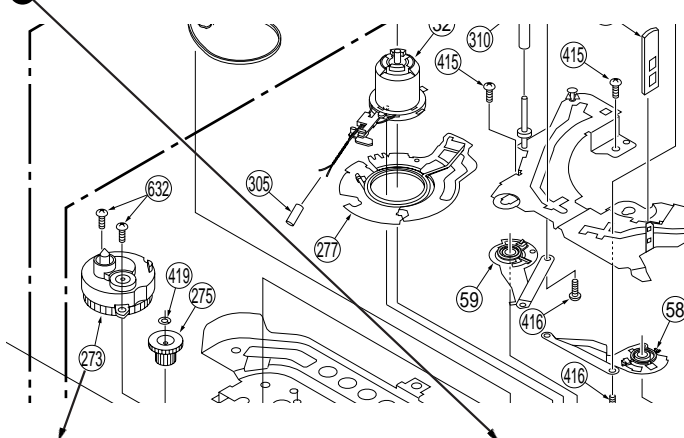
MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C

MECHANICAL REPLACEMENT PARTS LIST

<The complete Exploded Views are shown in this manual.>

EXPLODED VIEWS

1 VCR MECHANISM SECTION



Ref. No.	Part No.	Part Name	Remarks
MECHANISM PARTS ON CHASSIS			
			(Section No.)
7	VDGW0072	TAKE GEAR	1
9		CYLINDER UNIT	
	VEGW0100	(A)	1
	VEGW0101	(B,C)	1
10	VGLW0088	TALLY LED PANEL	3
11		UPPER CYLINDER UNIT	
	VEHW0032	(A)	1
	VEHW0033	(B,C)	1
12	VEMW0079	CAPSTAN UNIT	1
13	VEMW0074	FOCUS MOTOR UNIT,300MM	2
15	VFBW0085	HAND STRAP,NYLON	2
16	VFLW0448	OPTICAL FILTER	2
17	VKFW0067	EVR COVER	3
22	VMAW0642	SPRING SUPPORTER	2
23	VMBS0717	PRE-LOAD SPRING	1
29	VMDW0341	BACK UP COVER	3
30	VEQW0296	BATTERY CATCHER UNIT	3
31	VMGW0213	FILTER RUBBER	2
32	VEMW0078	LOADING MOTOR UNIT,2W	1
33	VMAW0745	P.C.B. ANGLE	1
37	VMAW0744	MECHANISM SUPPORT ANGLE	1
40	VXAW0214	CASSETTE UP UNIT	1
44	VXDW0186	TAKEUP POST UNIT	1
45	VXDW0187	SUPPLY POST UNIT	1
48	VXNW0019	LENS UNIT	2
49	VXKW0099	MECHANISM CHASSIS ASS'Y	1 RTL
50		VCR MECHANISM CHASSIS ASS'Y	
	VXKW0095	(A)	2 RTL
	VXKW0096	(B,C)	2 RTL
51	VXLW0080	TENSION UNIT	1
52	VXLW0082	PINCH ARM UNIT	1
54	VXLW0083	IDLER ARM UNIT	1
55	VXPW0025	REEL TABLE UNIT	1
56	VXPW0024	REV CLUTCH	1
58	VXLW0078	TAKEUP LOADING ARM UNIT	1
59	VXLW0077	SUPPLY LOADING ARM UNIT	1
61		ELECTRONIC VIEWFINDER UNIT	
	VYKW3192E	(A,B)	2
		COLOR ELECTRONIC VIEWFINDER UNIT	
	VYKW3143E	(C)	2
67		CASSETTE COVER UNIT	
	VYKW3228C	(A)	3
	VYKW3229C	(B)	3
	VYKW3230C	(C)	3
71	LSJA0185	PC COMMU CABLE W/PLUG,15V (WINDOWS)	5

Ref. No.	Part No.	Part Name	Remarks
74		INFRARED REMOTE CONTROL UNIT	
	VSQW0038	(A,C)	5
75	VFTW0013	DRIVER SOFTWARE FD FOR WINDOWS 95/98	5
76		APPRICATION SOFTWARE CD-ROM	
	VFTW0014	(C)	5
77		INSTRUCTION BOOK	
	VQTW0745A	(A,C)	5
	VQTW0746A	(B)	5
81	VJAW0029	DC COMMU CABLE W/PLUG,6V	5
	OR VJAW0030		
82	VJAW0039	AUDIO/VIDEO COMMU CABLE W/PLUG	5
83	VPNW0050	CUSHION,PAPER	5
84	VPFW0049	BAG,POLYETHYLENE	5
85		PACKING CASE,PAPER	
	VPGW0751	(A)	5
	VPGW0752	(B)	5
	VPGW0753	(C)	5
86	VPNW0051	ACCESSORY CUSHION,PAPER	5
87	VPGW0755	ACCESSORY PAD	5
88		FAN BAG	
	VQFW0745	(A)	5
	VQFW0746	(B)	5
	VQFW0747	(C)	5
89	VSBW0004	BATTERY UNIT	3,5
90		REMOTE CONTROL HOLDER	
	VGQ6893	(A,C)	5
92	VYCW0225	SHOLDER STRAP,POLYPROPYLENE	5
93	VYMW0009	CASSETTE ADAPTOR	5
100	VEQW0279	VCR OPERATION UNIT	4
106	VGLW0090	POWER LED PANEL	2
107	VGW0575	EJECT KNOB	3
109	VGW0603	TAPE CHANGE KNOB	2
111	VGW0190	DISPLAY BUTTON	3
114		ELECTRONIC VIEWFINDER DUST COVER	
	VKGW1063	(A,B)	4
115		SIDE CASE L,ABS RESIN	
	VKMW1846	(A,C)	△ 2
	VKMW1865	(B)	△ 2
117	VMAW0749	TRIPOD FRAME	2
118		ELECTRONIC VIEWFINDER PLATE, STEEL	
	VMAW0698	(A,B)	4
	VMAW0677	(C)	4
119	VMAW0750	ELECTRONIC VIEWFINDER ANGLE	2
120	VMZW0657	INSULATION SHEET B,PLASTIC	3
121	VMZW0682	PANEL BARRIER	3
122	VMZW0685	BARRIER	3
123	VMZW0686	FRAME SHEET,PLASTIC	3
128		MICROPHONE/INFRARED UNIT	
	VXMW0113	(A,C)	3
	VXMW0114	(B)	3
129		ELECTRONIC VIEWFINDER LCD PANEL UNIT	
	MCL0512B03	(C)	4
130	VEQW0291	TOP OPERATION UNIT	3
131	VEQW0293	SIDE L FLEXIBLE PRINTED CIRCUIT UNIT	2
132		ELECTRONIC VIEWFINDER LENS	
	VFLW0170	(A,B)	4
137		LOCK KNOB	
	VGW0547	(C)	4
138	VGW0194	TOP BUTTON	3
140		ELECTRONIC VIEWFINDER LCD HOLDER	
	VKFW0056	(C)	4
142		EYE CAP HOLDER	
	VKGW1031	(A,B)	4
143		EYE SIGHT RING	
	VKGW1045	(A,B)	4
144		LOCK PIECE	
	VKGW1047	(A,B)	4
148		ELECTRONIC VIEWFINDER CASE A, ABS RESIN	
	VKMW1300	(A,B)	△ 4
	VKMW1817	(C)	△ 4

ELECTRICAL REPLACEMENT
PARTS LIST

(E1, E2, E3, E4, E5, E8, E52, E53)

Ref. No.	Part No.	Part Name	Remarks
		PRINTED CIRCUIT BOARD ASSEMBLY	
E1	VEPW1635A1	MAIN C.B.A.	■ E.S.D. RTL
	(A)		
E1	VEPW1635B1	MAIN C.B.A.	■ E.S.D. RTL
	(B)		
E1	VEPW1635C1	MAIN C.B.A.	■ E.S.D. RTL
	(C)		
E8	VEPW1674A1	PC OUT JACK C.B.A.	■ RTL
E2	VEQW0301	CCD C.B.A.	■ E.S.D. RTL
E53	VEPW1640A1	RELAY C.B.A.	■
E52	VEPW1639B1	LIQUID CRYSTAL DISPLAY C.B.A.	■ RTL
E3	VEPW1641A1	ELECTRONIC VIEWFINDER C.B.A.	■ RTL
	(A,B)		
E4	VEPW1666A1	COLOR ELECTRONIC VIEWFINDER A C.B.A.	■ E.S.D. RTL
	(C)		
E5	VEPW1671A1	COLOR ELECTRONIC VIEWFINDER B C.B.A.	■ RTL
	(C)		
		MAIN C.B.A.	■
		INTEGRATED CIRCUITS	
IC301	MN67324	IC, LOGIC DIGITAL SIGNAL	E.S.D.
		PROCESS	
IC302	ZA4035H	IC, 2.7M D RAM FIELD MEMORY	E.S.D.
IC304	TC7W240FU	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC305	BR9040F-E1	IC, 4K EEP ROM	E.S.D. NOTE
	OR S29355AFETF	IC, 4K EEP ROM	E.S.D. NOTE
IC307	MC14050BDETL	IC, CMOS STANDARD LOGIC	E.S.D.
		INVERTER	
IC309	BA10324AFVE1	IC, LINEAR HALL/IRIS AMP.	
	OR LM324DB	IC, LINEAR HALL/IRIS AMP.	
IC310	HD74HC244TEL	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC311	HD74HC244TEL	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC312	HD74HC244TEL	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC501	HD7065M02F	IC, 32BIT MICROCONTROLLER	E.S.D.
		CAMERA/DSC	
IC503	ADM202JRN	IC, CMOS STANDARD LOGIC RS232C DRIVER	E.S.D.
IC602	MN5263	IC, CMOS GATE ARRAYS TIMING	E.S.D.
		SIGNAL GENERATOR	
IC603	MN3112SA-E1	IC, CMOS STANDARD LOGIC CCD V DRIVE	E.S.D.
IC605	AN2109FHQ	IC, LINEAR SAMPLING HOLD	
IC701	LB1837M-TE-L	IC, LINEAR MOTOR DRIVE	
	OR LB1837MLTEL3	IC, LINEAR MOTOR DRIVE	
	OR LB1837MTL3	IC, LINEAR MOTOR DRIVE	
IC702	LB1837M-TE-L	IC, LINEAR MOTOR DRIVE	
	OR LB1837MLTEL3	IC, LINEAR MOTOR DRIVE	
	OR LB1837MTL3	IC, LINEAR MOTOR DRIVE	
IC1001	BA9710KV	IC, LINEAR POWER CONTROL	
IC2001	AN3897FH	IC, LINEAR CYLINDER/CAPSTAN MOTOR DRIVE CONTROL	
IC2002	UN224-TX	IC, LINER POWER TRANSISTOR	
		MOTOR DRIVE	
IC2003	UN224-TX	IC, LINER POWER TRANSISTOR	
		MOTOR DRIVE	
IC3001	AN2401NFH	IC, LINEAR Y/C REC/PB PROCESS	
IC3002	MN38663S	IC, CCD 1H DELAY	E.S.D.
IC4001	BA7757BK	IC, LINEAR AUDIO REC/PB PROCESS	
IC4003	NJM2125F-TE1	IC, LINEAR AUDIO DETECT	
	OR NJM2125F-TE2	IC, LINEAR AUDIO DETECT	
IC6001	MN101D02FWB3	IC, 8BIT MICROCONTROLLER	E.S.D.
		SYSTEM CONTROL	
IC6002	PST9339UR	IC, LINEAR RESET	
	OR S80839ANNPT2	IC, LINEAR RESET	
IC6005	S3510AEFJTB	IC, PERIPHERAL MCU CLOCK IN	E.S.D.

*NOTE: When replacing this IC, be sure to write the initial data with PC-EVR Adjustment Program.

Ref. No.	Part No.	Part Name	Remarks
IC6006	RHSRE45AA-T1	IC, PERIPHERAL MCU +4.5V	E.S.D.
		REGULATOR	
	OR XC62FP4502PR	IC, PERIPHERAL MCU +4.5V	E.S.D.
		REGULATOR	
IC6007	BA6288FS-E2	IC, LINEAR LOADING MOTOR DRIVE	
IC6201	AN13585-E1	IC, LINEAR OP. AMP.	
	OR UPC358GR-E1	IC, LINEAR OP. AMP.	
	OR UPC358G2-E1	IC, LINEAR OP. AMP.	
	OR UPC358G2E1MS	IC, LINEAR OP. AMP.	
IC6202	TC4W53FTE12L	IC, CMOS STANDARD LOGIC AMP.	E.S.D.
		SW.	
IC6203	0N2170-RLM	TAKEUP REEL SENSOR	
		TRANSISTORS	
Q301	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q302	Z5C3931	CHIP	
Q303	MSB1218A(R)	CHIP	
	OR 25A1576T106R	CHIP	
	OR 25B1218A	CHIP	
	OR 25B1218AI	CHIP	
Q305	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q306	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q307	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q310	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q311	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q611	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q617	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q703	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q1001	DTA114EU	CHIP	
	OR MUNS111T1	CHIP	
	OR UN5111	CHIP	
Q1002	DTA144EU	CHIP	
	OR MUNS113T1	CHIP	
	OR UN5113	CHIP	
Q1003	DTA114TU	CHIP	
	OR MUNS115T1	CHIP	
	OR UN5115	CHIP	
Q1004	MSB1218A(R)	CHIP	
	OR 25A1576T106R	CHIP	
	OR 25B1218A	CHIP	
	OR 25B1218AI	CHIP	
Q1005	Z5B1628-T1ZX	CHIP	
	OR 25B1628-T1ZY	CHIP	
Q1006	MPL1-TL	CHIP	
Q1007	Z5B1424T100P	CHIP	
	OR 25B1424T100Q	CHIP	
Q1008	MPL1-TL	CHIP	
Q1009	MPL1-TL	CHIP	

Ref. No.	Part No.	Part Name	Remarks
Q1010	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q1011	IMX1T108	COMPLX CMP SI NPN CHIP	
	OR XN4501	COMPLX CMP SI NPN CHIP	
Q1012	2SB1073	CHIP	
	OR 2SB1386T100Q	CHIP	
	OR 2SB1386T100R	CHIP	
	(A)		
Q1013	2SB1585	CHIP	
	OR 2SB970	CHIP	
	(B,C)		
Q1020	2SB1073	CHIP	
	OR 2SB1386T100Q	CHIP	
	OR 2SB1386T100R	CHIP	
	(A,B)		
Q1021	DTC124EU	CHIP	
	OR MUN5212T1	CHIP	
	OR UN5212	CHIP	
	(A,B)		
Q1022	2SB1585	CHIP	
	OR 2SB970	CHIP	
Q1023	IMX1T108	COMPLX CMP SI NPN CHIP	
	OR XN4501	COMPLX CMP SI NPN CHIP	
Q1101	2SA1615-ZT1K		
	OR 2SA1615-ZT1L		
	OR 2SA1834TLR		
	OR 2SA1834TLS		
Q1102	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q1103	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q1104	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q1105	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q1106	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q1107	DTC144EU	CHIP	
	OR MUN5213	CHIP	
	OR UN5213	CHIP	
Q3003	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q3004	2SC3931	CHIP	
Q3005	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q3021	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q3022	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q3026	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q3027	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	

Ref. No.	Part No.	Part Name	Remarks
Q3028	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q3029	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q4002	XN4601	COMPLX CMP SI NPN/PNP CHIP	
Q4003	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q4004	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q4007	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q4008	MSD602(R)	CHIP	
	OR 2SD2432(R)	CHIP	
	OR 2SD602(R)	CHIP	
	OR 2SD602A(R)	CHIP	
Q4009	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q4010	2SB1585	CHIP	
	OR 2SB970	CHIP	
Q4011	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q4013	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q4014	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q6001	DTA124EU	CHIP	
	OR MUN5112T1	CHIP	
	OR UN5112	CHIP	
Q6004	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q6005	DTC124TU	CHIP	
	OR UN5217	CHIP	
Q6006	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
	(A,C)		
Q6007	FMW1T148	COMPLX CMP SI NPN CHIP	
	OR XN1501	COMPLX CMP SI NPN CHIP	
	(A,C)		
Q6008	DTC124TU	CHIP	
	OR UN5217	CHIP	
Q6009	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q6010	DTC124EU	CHIP	
	OR MUN5212T1	CHIP	
	OR UN5212	CHIP	
Q6011	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q6012	2SK1958	F.E.T. CHIP	
Q6013	MSD601(R)	CHIP	
	OR 2SC2412K1	CHIP	
	OR 2SD601A	CHIP	
	OR 2SD601AI	CHIP	

Ref. No.	Part No.	Part Name	Remarks
Q6018	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q6021	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 25B1218A	CHIP	
	OR 25B1218AI	CHIP	
Q6022	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q6026	DTA144EU	CHIP	
	OR MUNS113T1	CHIP	
	OR UNS113	CHIP	
Q6035	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q6201	25B1585	CHIP	
	OR 25B970	CHIP	
Q6202	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
		DIODES	
D1001	MA3120WA	ZENER CHIP 12V	
D1002	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D1003	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D1004	MA736	CHIP	
	OR SFPB-54V	CHIP	
D1005	MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D1006	MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D1007	MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D1008	MA728	CHIP	
D1101	RD12S-B-T1	ZENER CHIP 12V	
D1103	DAP202UT	CHIP	
	OR MA141WA	CHIP	
	OR MA142WA	CHIP	
	OR MA142WAI	CHIP	
	OR M1MA142WA	CHIP	
D4001	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D4002	MA3120WA	CHIP	
D4003	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D4004	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D6001	DAN202UT	CHIP	
	OR MA141WK	CHIP	
	OR MA142WK	CHIP	
	OR MA142WKI	CHIP	
D6005	DAP202UT	CHIP	
	OR MA141WA	CHIP	
	OR MA142WA	CHIP	
	OR MA142WAI	CHIP	
	OR M1MA142WA	CHIP	
D6008	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D6015	DA204U	CHIP	
	OR MA143	CHIP	
D6019	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	

Ref. No.	Part No.	Part Name	Remarks
D6201	DA204U	CHIP	
	OR MA143	CHIP	
D6203	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D6204	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
		RESISTORS	
R301	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R302	VRJSD3D6800	MGF CHIP +-0.5% 1/16W 680	
R303	ERJ3GEYG102V	MGF CHIP +-2% 1/16W 1K	
R304	VRJSD3D2201	MGF CHIP +-0.5% 1/16W 2.2K	
R305	VRJSD3D2201	MGF CHIP +-0.5% 1/16W 2.2K	
R306	ERJ3GEYJ391V	MGF CHIP 1/16W 390	
R307	ERJ3GEYG103V	MGF CHIP +-2% 1/16W 10K	
R308	ERJ3GEYG391V	MGF CHIP +-2% 1/16W 390	
R309	ERJ3GEYG102V	MGF CHIP +-2% 1/16W 1K	
R310	ERJ3GEYG102V	MGF CHIP +-2% 1/16W 1K	
R311	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R314	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R315	ERJ3GEYG181V	MGF CHIP +-2% 1/16W 180	
R316	ERJ3GEYJ121V	MGF CHIP 1/16W 120	
R317	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R318	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R319	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R320	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R321	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R322	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R323	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R324	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R327	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R333	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R336	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R340	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R342	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R343	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R344	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R345	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R346	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R347	ERJ3GEYJ123X	MGF CHIP 1/16W 12K	
R348	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R349	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R350	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R351	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R352	ERJ3GEYJ823V	MGF CHIP 1/16W 82K	
R353	ERJ3GEYJ562X	MGF CHIP 1/16W 5.6K	
R355	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R356	ERJ3GEYJ394V	MGF CHIP 1/16W 390K	
R357	ERJ3GEYJ474V	MGF CHIP 1/16W 470K	
R358	ERJ3GEYJ123X	MGF CHIP 1/16W 12K	
R359	ERJ3GEYJ123X	MGF CHIP 1/16W 12K	
R360	ERJ3GEYJ331X	MGF CHIP 1/16W 330	
R361	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R362	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R363	ERJ3GEYJ123X	MGF CHIP 1/16W 12K	
R364	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R365	ERJ3GEYK225V	MGF CHIP +-10% 1/16W 2.2M	
R366	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R367	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R368	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R369	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R370	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R371	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R372	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R373	ERJ3GEYJ303V	MGF CHIP 1/16W 30K	
R374	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R375	ERJ3GEYJ333X	MGF CHIP 1/16W 33K	
R376	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R377	ERJ3GEYJ333X	MGF CHIP 1/16W 33K	
R378	ERJ3GEYJ333X	MGF CHIP 1/16W 33K	
R379	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R380	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R381	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R382	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R383	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●

Ref. No.	Part No.	Part Name	Remarks
R384	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R385	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R386	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R387	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R388	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R389	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R390	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R391	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R393	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R394	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R395	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R397	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R398	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R402	ERJ3GEYG472V	MGF CHIP $\pm 2\%$ 1/16W 4.7K	
R410	EXB24V331JX	CHIP ARRAY 330	
R411	EXB24V331JX	CHIP ARRAY 330	
R412	EXB24V331JX	CHIP ARRAY 330	
R413	EXB24V331JX	CHIP ARRAY 330	
R414	EXB24V331JX	CHIP ARRAY 330	
R415	EXB24V331JX	CHIP ARRAY 330	
R427	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R430	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R431	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R432	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R433	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R434	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R436	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R437	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R438	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R441	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R450	EXB24V473JX	CHIP ARRAY 47K	
R451	EXB24V473JX	CHIP ARRAY 47K	
R452	EXB24V473JX	CHIP ARRAY 47K	
R453	EXB24V473JX	CHIP ARRAY 47K	
R454	EXB24V473JX	CHIP ARRAY 47K	
R455	EXB24V473JX	CHIP ARRAY 47K	
R462	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R470	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R471	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R472	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R473	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R474	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R475	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R476	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R477	EXB24V473JX	CHIP ARRAY 47K	
R479	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R480	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R501	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R502	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R503	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R504	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R505	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R506	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R507	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R508	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R509	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R510	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R512	ERJ3GEYJ331X	MGF CHIP 1/16W 330	
R513	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R515	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R522	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R523	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R524	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R525	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R526	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R527	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R528	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R529	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R531	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R538	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R539	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R540	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R541	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R542	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R543	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R544	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R545	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R546	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●

Ref. No.	Part No.	Part Name	Remarks
R555	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R556	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R558	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R563	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R564	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R565	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R566	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R567	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R568	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R569	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R570	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R571	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R572	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R603	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R605	ERJ3GEYJ331X	MGF CHIP 1/16W 330	
R608	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R609	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R610	ERJ3GEYJ331X	MGF CHIP 1/16W 330	
R611	ERJ3GEYJ331X	MGF CHIP 1/16W 330	
R614	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R615	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R617	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R618	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R620	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R621	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R623	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R626	ERJ3GEYJ183X	MGF CHIP 1/16W 18K	
R627	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R630	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R635	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R639	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R641	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R643	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R644	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R645	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R646	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R650	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R651	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R652	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R653	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R656	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R659	ERJ3GEYJ562X	MGF CHIP 1/16W 5.6K	
R662	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R667	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R668	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R670	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R677	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R680	ERJ3GEYJ331X	MGF CHIP 1/16W 330	
R683	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R684	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R701	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R702	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R703	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R704	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R705	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R706	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R707	ERJ8GEYJ101V	MGF CHIP 1/8W 100	
R708	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R709	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R710	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R711	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R712	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R713	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R714	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R715	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R718	ERJ3GEYJ562X	MGF CHIP 1/16W 5.6K	
R719	ERJ3GEYJ183X	MGF CHIP 1/16W 18K	
R720	ERJ3GEYJ114V	MGF CHIP 1/16W 110K	
R721	ERJ3GEYJ183X	MGF CHIP 1/16W 18K	
R722	ERJ3GEYJ114V	MGF CHIP 1/16W 110K	
R723	ERJ3GEYJ363V	MGF CHIP 1/16W 36K	
R724	ERJ3GEYJ363V	MGF CHIP 1/16W 36K	
R726	ERJ3GEYJ562X	MGF CHIP 1/16W 5.6K	
R728	ERJ6GEYJ3R9V	MGF CHIP 1/10W 3.9	
R729	ERJ6GEYJ5R6V	MGF CHIP 1/10W 5.6	
R730	ERJ3GEYJ562X	MGF CHIP 1/16W 5.6K	
R732	ERJ3GEYJ562X	MGF CHIP 1/16W 5.6K	
R735	ERJ3GEYJ363V	MGF CHIP 1/16W 36K	

Ref. No.	Part No.	Part Name	Remarks
R736	ERJ3GEYJ363V	MGF CHIP 1/16W 36K	
R737	ERJ3GEYJ114V	MGF CHIP 1/16W 110K	
R738	ERJ3GEYJ183X	MGF CHIP 1/16W 18K	
R739	ERJ3GEYJ114V	MGF CHIP 1/16W 110K	
R740	ERJ3GEYJ183X	MGF CHIP 1/16W 18K	
R744	ERJ6GEYJ3R3V	MGF CHIP 1/10W 3.3	
R745	ERJ6GEYJ3R9V	MGF CHIP 1/10W 3.9	
R746	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R747	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R748	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R749	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R750	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R751	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R752	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1001	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R1003	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R1004	VRJSD3D270Z	MGF CHIP +-0.5% 1/16W 27K	
R1005	VRJSD3D150Z	MGF CHIP +-0.5% 1/16W 15K	
R1006	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R1007	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R1008	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R1009	VRJSD3D1801	MGF CHIP +-0.5% 1/16W 1.8K	
R1010	VRJSD3D1801	MGF CHIP +-0.5% 1/16W 1.8K	
R1011	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R1012	VRJSD3D5101	MGF CHIP +-0.5% 1/16W 5.1K	
R1013	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R1014	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R1015	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R1016	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R1017	ERJ3GEYJ333X	MGF CHIP 1/16W 33K	
R1018	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R1019	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R1020	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1021	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1022	ERJ3GEYJ270V	MGF CHIP 1/16W 27	
R1023	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R1024	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R1025	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1026	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R1027	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R1028	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1029	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1030	ERJ3GEYJ470V	MGF CHIP 1/16W 47	
R1031	VRJSD3D6801	MGF CHIP +-0.5% 1/16W 6.8K	
R1032	VRJSD3D2401	MGF CHIP +-0.5% 1/16W 2.4K	
R1033	VRJSD3D22R0	MGF CHIP +-0.5% 1/16W 22	
R1034	VRJSD3D5601	MGF CHIP +-0.5% 1/16W 5.6K	
R1035	VRJSD3D2701	MGF CHIP +-0.5% 1/16W 2.7K	
R1036	VRJSD3D68R0	MGF CHIP +-0.5% 1/16W 68	
R1037	VRJSD3D270Z	MGF CHIP +-0.5% 1/16W 27K	
R1038	VRJSD3D1001	MGF CHIP +-0.5% 1/16W 1K	
R1039	VRJSD3D2401	MGF CHIP +-0.5% 1/16W 2.4K	
R1040	VRJSD3D220Z	MGF CHIP +-0.5% 1/16W 22K	
R1041	VRJSD3D2201	MGF CHIP +-0.5% 1/16W 2.2K	
R1042	VRJSD3D180Z	MGF CHIP +-0.5% 1/16W 18K	
R1043	VRJSD3D1000	MGF CHIP +-0.5% 1/16W 100	
R1044	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R1045	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
R1046	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R1047	ERJ6GEYJ330V	MGF CHIP 1/10W 33	
R1050	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1051	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1055	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1056	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
	(A , B)		
R1057	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
	(C)		
R1058	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
	(A , B)		
R1059	ERJ3GEYJ681X	MGF CHIP 1/16W 680	
	(A , B)		
R1060	ERJ3GEYJ821X	MGF CHIP 1/16W 820	
R1061	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R1062	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R1064	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R1065	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
	(A)		
	ERJ3GEYJ392X	MGF CHIP 1/16W 3.9K	
	(B , C)		

Ref. No.	Part No.	Part Name	Remarks
R1066	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1067	VRJSD3D1801	MGF CHIP +-0.5% 1/16W 1.8K	
R1068	VRJSD3D1801	MGF CHIP +-0.5% 1/16W 1.8K	
R1069	VRJSD3D33R0	MGF CHIP +-0.5% 1/16W 33	
R1073	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R1075	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R1076	ERJ3GEYJ392X	MGF CHIP 1/16W 3.9K	
R1078	VRJSD3D1801	MGF CHIP +-0.5% 1/16W 1.8K	
R1079	VRJSD3D1801	MGF CHIP +-0.5% 1/16W 1.8K	
R1080	VRJSD3D33R0	MGF CHIP +-0.5% 1/16W 33	
R1081	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R1101	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R1102	ERJ8GEYJ681V	MGF CHIP 1/8W 680	
R1103	ERJ8GEYJ681V	MGF CHIP 1/8W 680	
R1104	ERJ8GEYKR56V	MGF CHIP +-10% 1/8W 0.56	
R1105	ERJ8GEYKR56V	MGF CHIP +-10% 1/8W 0.56	
R1106	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R1107	ERJ3GEYJ333X	MGF CHIP 1/16W 33K	
R1108	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R1109	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R1110	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R1111	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R1112	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R1113	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R2001	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R2003	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R2004	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R2008	ERJ8GEYJR33V	MGF CHIP 1/8W 0.33	
R2009	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R2010	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R2011	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R2012	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R2013	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R2014	ERJ3GEYJ684V	MGF CHIP 1/16W 680K	
R2015	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R2016	ERJ3GEYJ684V	MGF CHIP 1/16W 680K	
R2020	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R2021	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R2022	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R2023	ERJ8GEYJR33V	MGF CHIP 1/8W 0.33	
R2025	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R2026	ERJ3GEYJ820V	MGF CHIP 1/16W 82	
R2027	ERJ3GEYJ471X	MGF CHIP 1/16W 470	
R2028	ERJ3GEYJ391V	MGF CHIP 1/16W 390	
R2029	ERJ3GEYJ391V	MGF CHIP 1/16W 390	
R2030	ERJ3GEYJ471X	MGF CHIP 1/16W 470	
R2031	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R2032	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R2034	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R2035	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R2040	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R2042	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R3002	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R3003	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3004	ERJ3GEYJ270V	MGF CHIP 1/16W 27	
R3005	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3006	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R3008	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R3009	ERJ3GEYJ392X	MGF CHIP 1/16W 3.9K	
R3010	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R3011	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R3015	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R3016	ERJ3GEYJ821X	MGF CHIP 1/16W 820	
R3017	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R3018	ERJ3GEYJ471X	MGF CHIP 1/16W 470	
R3022	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R3023	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R3024	ERJ6GEYJ560V	MGF CHIP 1/10W 56	
R3025	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R3026	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R3031	ERJ3GEYJ821X	MGF CHIP 1/16W 820	
R3032	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R3033	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R3034	ERJ3GEYJ821X	MGF CHIP 1/16W 820	
R3035	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R3036	ERJ3GEYJ471X	MGF CHIP 1/16W 470	
R3037	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R3038	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	

Ref. No.	Part No.	Part Name	Remarks
R3039	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R3040	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R3041	ERJ3GEYJ681X	MGF CHIP 1/16W 680	
R3044	ERJ3GEYJ681X	MGF CHIP 1/16W 680	
R3045	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R3048	ERJ3GEYJ681X	MGF CHIP 1/16W 680	
R3050	ERJ3GEYJ821X	MGF CHIP 1/16W 820	
R3129	ERJ3GEYJ391V	MGF CHIP 1/16W 390	
R3130	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R3133	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R3134	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R3140	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R3150	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3151	ERJ3GEYJ183X	MGF CHIP 1/16W 18K	
R3152	ERJ3GEYJ821X	MGF CHIP 1/16W 820	
R3153	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R3154	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R3161	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R3165	ERJ3GEYJ471X	MGF CHIP 1/16W 470	
R3169	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3173	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
	(B,C)		
R3174	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
	(A)		
R3176	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R3180	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R3181	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R3182	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R3183	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3184	ERJ3GEYJ821X	MGF CHIP 1/16W 820	
R3185	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R3186	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R3187	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3188	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3190	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R3191	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R4001	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R4002	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R4004	ERJ3GEYJ123X	MGF CHIP 1/16W 12K	
R4005	ERJ3GEYJ333X	MGF CHIP 1/16W 33K	
R4006	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R4007	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R4008	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R4009	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R4010	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4011	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R4012	ERJ3GEYJ163V	MGF CHIP 1/16W 16K	
R4013	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R4014	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R4015	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R4016	ERJ3GEYJ183X	MGF CHIP 1/16W 18K	
R4017	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R4018	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R4019	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R4020	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4021	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R4024	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R4025	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R4027	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R4029	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R4030	ERJ3GEYJ680V	MGF CHIP 1/16W 68	
R4031	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R4032	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R4033	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R4034	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R4035	ERJ3GEYJ101X	MGF CHIP 1/16W 100	
R4036	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R4037	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R4046	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R4047	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R4048	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R4049	ERJ3GEYJ124V	MGF CHIP 1/16W 120K	
R4050	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R4052	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R4053	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R4054	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R4055	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R4056	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	

Ref. No.	Part No.	Part Name	Remarks
R4057	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R4060	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R4061	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R4062	ERJ3GEYJ333X	MGF CHIP 1/16W 33K	
R6004	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6006	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R6007	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6008	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R6009	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6010	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6011	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6012	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
	(A,C)		
R6013	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
	(A,C)		
R6014	ERJ3GEYJ333X	MGF CHIP 1/16W 33K	
	(A,C)		
R6015	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6016	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6017	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6019	ERJ3GEYJ474V	MGF CHIP 1/16W 470K	
R6020	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6021	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6022	ERJ6GEYJ5R6V	MGF CHIP 1/10W 5.6	
R6023	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R6024	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R6025	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6026	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6027	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R6028	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R6029	ERJ3GEYJ332X	MGF CHIP 1/16W 3.3K	
R6030	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R6031	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R6034	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R6037	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6038	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R6039	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R6040	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R6041	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6042	ERJ3GEYJ124V	MGF CHIP 1/16W 120K	
R6043	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6044	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6045	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R6046	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6047	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6048	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6049	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6050	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6051	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6052	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6054	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R6056	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6058	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6060	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6061	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6062	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6063	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R6064	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R6066	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6068	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R6072	ERJ3GEYJ392X	MGF CHIP 1/16W 3.9K	
R6073	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R6074	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R6075	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6077	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6079	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6080	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6081	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6082	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6083	ERJ3GEYJ681X	MGF CHIP 1/16W 680	
R6084	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R6085	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R6086	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R6087	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R6088	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R6089	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6090	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6091	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	

Ref. No.	Part No.	Part Name	Remarks
R6092	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6093	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6094	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6095	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R6096	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R6097	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6098	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6099	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6100	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
	(A, C)		
R6101	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
	(B)		
R6102	VRJSD3D1802	MGF CHIP +-0.5% 1/16W 18K	
R6103	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R6104	VRJSD3D1002	MGF CHIP +-0.5% 1/16W 10K	
R6108	ERJ3GEYJ564V	MGF CHIP 1/16W 560K	
R6110	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6111	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6112	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6113	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R6114	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R6115	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R6116	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R6119	ERJ8GEYJ101V	MGF CHIP 1/8W 100	
R6120	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6129	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6131	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R6132	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R6133	ERJ3GEYJ223X	MGF CHIP 1/16W 22K	
R6135	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R6142	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R6143	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R6144	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R6145	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6146	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R6147	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R6148	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6149	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6152	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6162	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6179	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6184	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R6191	ERJ3GEYJ473X	MGF CHIP 1/16W 47K	
R6201	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R6202	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R6209	ERJ3GEYJ225V	MGF CHIP 1/16W 2.2M	
R6210	ERJ3GEYJ561X	MGF CHIP 1/16W 560	
R6211	ERJ3GEYJ102X	MGF CHIP 1/16W 1K	
R6212	ERJ3GEYJ392X	MGF CHIP 1/16W 3.9K	
R6213	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R6215	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R6216	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R6217	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R6219	ERJ3GEYJ272X	MGF CHIP 1/16W 2.7K	
R6220	ERJ3GEYJ472X	MGF CHIP 1/16W 4.7K	
R6221	ERJ3GEYJ222X	MGF CHIP 1/16W 2.2K	
R6226	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
R6227	ERJ3GEYJ103X	MGF CHIP 1/16W 10K	
R6230	ERJ3GEYJ392X	MGF CHIP 1/16W 3.9K	
R6231	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R6252	ERJ3GEYJ104X	MGF CHIP 1/16W 100K	
R6253	ERJ3GEY0R00X	MGF CHIP 1/16W 0	●
		CAPACITORS	
C301	ECUV1H330JCV	C CHIP +-5% 50V 33P	
C302	ECUV1H560JCV	C CHIP +-5% 50V 56P	
C303	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C304	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C305	ECUV1H470JCV	C CHIP +-5% 50V 47P	
C306	ECST0JY106	TANTALUM CHIP 6.3V 10	
C307	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C308	ECUV1H102KBV	C CHIP 50V 1000P	
C309	ECST0JY106	TANTALUM CHIP 6.3V 10	
C310	ECST1CY105	TANTALUM CHIP 16V 1	
C311	ECST1CY105	TANTALUM CHIP 16V 1	
C312	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C313	ECEV0GA470S	ELECTROLYTIC CHIP 4V 47	

Ref. No.	Part No.	Part Name	Remarks
C314	ECST0JY106	TANTALUM CHIP 6.3V 10	
C315	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C316	ECST0JY106	TANTALUM CHIP 6.3V 10	
C317	ECST0JY106	TANTALUM CHIP 6.3V 10	
C318	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C319	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C320	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C321	ECST0JX226	TANTALUM CHIP 6.3V 22	
C323	ECST0JY106	TANTALUM CHIP 6.3V 10	
C326	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C327	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C329	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C330	ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	
C332	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C337	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C338	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C339	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C340	ECUE1H103KBV	C CHIP 50V 0.01	
C341	ECUV1H102KBV	C CHIP 50V 1000P	
C342	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C345	ECUV1H471KBV	C CHIP 50V 470P	
C346	ECUV1H471KBV	C CHIP 50V 470P	
C350	ECST0JY106	TANTALUM CHIP 6.3V 10	
C351	ECST0JY106	TANTALUM CHIP 6.3V 10	
C353	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C354	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C355	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C356	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C357	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C358	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C402	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C406	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C501	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C502	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C503	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C504	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C505	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C506	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C507	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C508	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C509	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C510	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C511	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C512	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C513	ECUV1H471KBV	C CHIP 50V 470P	
C514	ECUV1H471KBV	C CHIP 50V 470P	
C515	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C516	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C517	ECUV1H150JCV	C CHIP +-5% 50V 15P	
C519	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C520	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C521	ECST0JY106	TANTALUM CHIP 6.3V 10	
C522	ECUV1C104KBV	C CHIP 16V 0.1	
C523	ECUV1C104KBV	C CHIP 16V 0.1	
C524	ECUV1C104KBV	C CHIP 16V 0.1	
C525	ECUV1C104KBV	C CHIP 16V 0.1	
C526	ECST0JY106	TANTALUM CHIP 6.3V 10	
C527	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C528	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C529	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C530	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C531	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C604	ECUV1H150JCV	C CHIP +-5% 50V 15P	
C605	ECST0JX226	TANTALUM CHIP 6.3V 22	
C606	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C607	ECUV1H150JCV	C CHIP +-5% 50V 15P	
C608	ECUV1H150JCV	C CHIP +-5% 50V 15P	
C609	ECUV1H150JCV	C CHIP +-5% 50V 15P	
C610	ECRJA010A11B	TRIMMER CHIP 100V 10P	
C611	ECUV1H0800CV	C CHIP +-0.5P 50V 8P	
C613	ECUE1C104ZFV	C CHIP +80%-20% 16V 0.1	
C614	ECUV1C474KBM	C CHIP 16V 0.47	
C615	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C616	ECUV1C104KBV	C CHIP 16V 0.1	
C617	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C618	ECUE1H103ZFV	C CHIP +80%-20% 50V 0.01	
C619	ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	
C623	ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	

Ref. No.	Part No.	Part Name	Remarks
C633	ECST1CY225	TANTALUM CHIP 16V 2.2	
C634	ECST1CY225	TANTALUM CHIP 16V 2.2	
C636	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C637	MCUV1A105ZFN	C CHIP +80%-20% 10V 1	
C638	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C639	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C640	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C641	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C642	ECST0JX226	TANTALUM CHIP 6.3V 22	
C643	ECST0JY106	TANTALUM CHIP 6.3V 10	
C644	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C645	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C646	ECST0JY106	TANTALUM CHIP 6.3V 10	
C647	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C663	ECUV1H100DCV	C CHIP +-0.5P 50V 10P	
C701	ECUV1H392KBV	C CHIP 50V 3900P	
C702	ECUV1H392KBV	C CHIP 50V 3900P	
C703	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C704	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C705	ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	
C706	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C707	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C708	ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	
C709	ECUE1H103ZFN	C CHIP +80%-20% 50V 0.01	
C710	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C711	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C712	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C713	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C1002	ECUV1E223KBV	C CHIP 25V 0.022	
C1003	ECUV1E223KBV	C CHIP 25V 0.022	
C1004	ECST1AY475N	TANTALUM CHIP 10V 4.7	
C1005	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C1006	VCUSQ8C334KB	C CHIP 16V 0.33	
C1007	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C1008	ECUV1H331JCV	C CHIP +-5% 50V 330P	
C1009	VCUSQ8A105KB	C CHIP 10V 1	
C1010	ECUV1E223KBV	C CHIP 25V 0.022	
C1011	ECUV1H681KBV	C CHIP 50V 680P	
C1012	ECUV1H472KBV	C CHIP 50V 4700P	
C1013	ECUE1H103KBV	C CHIP 50V 0.01	
C1014	ECUV1H221KBV	C CHIP 50V 220P	
C1015	ECUV1H221KBV	C CHIP 50V 220P	
C1016	ECUV1H221KBV	C CHIP 50V 220P	
C1017	ECUV1H221KBV	C CHIP 50V 220P	
C1018	ECUE1H103KBV	C CHIP 50V 0.01	
C1019	ECUE1H103KBV	C CHIP 50V 0.01	
C1020	VCUSQ8C105KB	C CHIP 16V 1	
C1021	ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	
C1022	VCUSQFC475MB	C CHIP +-20% 16V 4.7	
C1023	VCUSQAA335KB	C CHIP 10V 3.3	
C1025	ECUV1H471KBV	C CHIP 50V 470P	
C1026	VCUSQAC225KB	C CHIP 16V 2.2	
C1027	ECEV0GA470S	ELECTROLYTIC CHIP 4V 47	
C1028	ECUV1H221KBV	C CHIP 50V 220P	
C1029	VCUSQAC105KB	C CHIP 16V 1	
C1030	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C1031	ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	
C1032	VCUSQAC105KB	C CHIP 16V 1	
C1033	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C1034	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C1035	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C1036	ECUV1H101JCV	C CHIP +-5% 50V 100P	
C1037	VCUSQAC105KB	C CHIP 16V 1	
C1038	ECEV1CA220S	ELECTROLYTIC CHIP 16V 22	
C1039	ECUV1H331KBV	C CHIP 50V 330P	
C1040	VCUSQAC105ZF	C CHIP +80%-20% 16V 1	
C1041	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C1042	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C1044	ECST0JX226	TANTALUM CHIP 6.3V 22	
C1045	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C1046	VCUSQAC105KB	C CHIP 16V 1	
C1047	ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	
	(A , B)		
C1050	ECUV1H222KBV	C CHIP 50V 2200P	
C1051	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C1053	MCUV1E104KBN	C CHIP 25V 0.1	
	(A)		
	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
	(B , C)		

Ref. No.	Part No.	Part Name	Remarks
C1054	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
	(A)		
C1055	VCUSQBA105KB	C CHIP 10V 1	
C1057	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C1058	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C1059	ECST0JY106	TANTALUM CHIP 6.3V 10	
C1101	ECUE1H103KBV	C CHIP 50V 0.01	
C1102	ECST0JX226	TANTALUM CHIP 6.3V 22	
C1103	ECUE1C104ZFN	C CHIP +80%-20% 16V 0.1	
C2001	MCUV1E104KBN	C CHIP 25V 0.1	
C2002	MCUV1E104KBN	C CHIP 25V 0.1	
C2003	MCUV1E104KBN	C CHIP 25V 0.1	
C2004	ECUE1H103KBV	C CHIP 50V 0.01	
C2005	ECUE1H103KBV	C CHIP 50V 0.01	
C2006	ECUE1H103KBV	C CHIP 50V 0.01	
C2007	ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	
C2008	ECUV1E333KBN	C CHIP 25V 0.033	
C2010	MCUV1E683KBN	C CHIP 25V 0.068	
C2011	VCUSQAC334KB	C CHIP 16V 0.33	
C2012	ECUV1E473KBN	C CHIP 25V 0.047	
C2013	ECUV1E473KBN	C CHIP 25V 0.047	
C2015	ECUV1H152KBV	C CHIP 50V 1500P	
C2016	ECUV1H331KBV	C CHIP 50V 330P	
C2017	ECST1AY475N	TANTALUM CHIP 10V 4.7	
C2021	ECUV1E473ZFN	C CHIP +80%-20% 25V 0.047	
C2022	ECUV1E473ZFN	C CHIP +80%-20% 25V 0.047	
C2023	ECUV1C224KBN	C CHIP 16V 0.22	
C2024	MCUV1C105KBM	C CHIP 16V 1	
C2025	ECUV1E103KBN	C CHIP 25V 0.01	
C2027	ECUV1C104KBV	C CHIP 16V 0.1	
C2028	ECUV1C104KBV	C CHIP 16V 0.1	
C2029	ECUV1C104KBV	C CHIP 16V 0.1	
C2030	MCUV1E104KBN	C CHIP 25V 0.1	
C2031	MCUV1E104KBN	C CHIP 25V 0.1	
C2032	MCUV1E104KBN	C CHIP 25V 0.1	
C2040	ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	
C3001	VCUSQAA335KB	C CHIP 10V 3.3	
C3002	ECUE1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3003	ECST0JX226	TANTALUM CHIP 6.3V 22	
C3005	ECUV1H220JCV	C CHIP +-5% 50V 22P	
C3006	ECUV1H332KBV	C CHIP 50V 3300P	
C3007	ECUV1H104ZFN	C CHIP +80%-20% 50V 0.1	
C3008	ECUE1H103KBV	C CHIP 50V 0.01	
C3009	ECUV1H104ZFN	C CHIP +80%-20% 50V 0.1	
C3010	ECUE1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3011	ECUV1H221JCV	C CHIP +-5% 50V 220P	
C3012	ECUV1H821KBV	C CHIP 50V 820P	
C3013	ECUV1H560JCV	C CHIP +-5% 50V 56P	
C3014	ECUV1H331JCV	C CHIP +-5% 50V 330P	
C3015	ECUV1H561JCV	C CHIP +-5% 50V 560P	
C3017	ECUE1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3018	MCUV1E104KBN	C CHIP 25V 0.1	
C3019	ECUE1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3021	ECST0JX226	TANTALUM CHIP 6.3V 22	
C3023	ECUV1E473KBN	C CHIP 25V 0.047	
C3024	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C3025	ECUE1H103KBV	C CHIP 50V 0.01	
C3028	ECUE1H103KBV	C CHIP 50V 0.01	
C3029	ECUE1H103KBV	C CHIP 50V 0.01	
C3030	ECUE1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3031	ECUV1C224KBN	C CHIP 16V 0.22	
C3032	ECUV1H332KBV	C CHIP 50V 3300P	
C3033	ECST1CY225	TANTALUM CHIP 16V 2.2	
C3034	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C3036	ECST1AY475N	TANTALUM CHIP 10V 4.7	
C3038	ECUV1H560JCV	C CHIP +-5% 50V 56P	
C3039	ECUV1H080CCV	C CHIP +-0.25P 50V 8P	
C3040	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3042	ECST0JX226	TANTALUM CHIP 6.3V 22	
C3043	ECST0JX226	TANTALUM CHIP 6.3V 22	
C3045	ECST0JY335	TANTALUM CHIP 6.3V 3.3	
C3046	ECEV0GA221S	ELECTROLYTIC CHIP 4V 220	
C3047	MCUV1C105KBM	C CHIP 16V 1	
C3048	ECUE1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3053	ECUV1H390JCV	C CHIP +-5% 50V 39P	
C3054	ECUV1H101JCV	C CHIP +-5% 50V 100P	
C3055	ECUV1H181JCV	C CHIP +-5% 50V 180P	
C3057	ECUV1H180JCV	C CHIP +-5% 50V 18P	

(E16, E38, E39, E46)

Ref. No.	Part No.	Part Name	Remarks
		PIN HEADERS	
B2	VJPW0262	BOARD TO BOARD 18P	
P2	VJPW0242	CONNECTOR 13P	
P3	VJPW0254	CONNECTOR 5P	
	(A,B)		
	VJPW0255	CONNECTOR 12P	
	(C)		
P13	VJPWB1V224B6	CONNECTOR 24P	
P38	VJPW0264	CONNECTOR 3P	
		FPC CONNECTOR	
FP1	VJPW0259	FPC CONNECTOR 26P	
FP3	VJS3319D026	FPC CONNECTOR 26P	
FP4	VJPW501MP06	FPC CONNECTOR 6P	
FP6	VJS3971D039	FPC CONNECTOR 39P	
FP7	VJPW0258	FPC CONNECTOR 16P	
FP8	VJS3452C012	FPC CONNECTOR 12P	
FP9	VJS3452C020	FPC CONNECTOR 20P	
FP11	VJS3319D013	FPC CONNECTOR 13P	
		FUSE & PROTECTOR	
F1001	VSW0004	FUSE 125V 3.15A Δ	
	OR VSF0079	FUSE 125V 3.15A Δ	
F1002	VSW0010	FUSE 63V 1.5A Δ	
		TRANSFORMER	
T1001	VTPW0003A		
T1002	VTPW0004		
T4001	EIQ6Q8008T		
		MISCELLANEOUS	
E38	VMTS0064M	CUSHION	
E39	VMDW0498	SENSOR HOLDER	
		PC OUT JACK C.B.A.	■
		MISCELLANEOUS	
J0001	VJPW0257	PC PLUG	
E46	VEKW1791	PC OUT JACK CABLE W/PLUG	
		CCD C.B.A.	■
		INTEGRATED CIRCUITS	
IC601	MN37243FT-M	IC, CCD	E.S.D.
		TRANSISTORS	
Q601	2SC3931	CHIP	
		RESISTORS	
R601	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R602	ERJ8GEYJ470V	MGF CHIP 1/8W 47	
R661	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
		CAPACITORS	
C601	ECST1EY105	TANTALUM CHIP 25V 1	
C603	ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	
C664	ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	
		MISCELLANEOUS	
E16	VMDW0515	CCD SURFACE PLATE,POLYESTER	

Ref. No.	Part No.	Part Name	Remarks
		RELAY C.B.A.	■
		PIN HEADERS	
P9001	VJPW0242	CONNECTOR 13P	
		FPC CONNECTOR	
FP9002	VJS3320D018	FPC CONNECTOR 18P	
		LIQUID CRYSTAL DISPLAY C.B.A.	■
		INTEGRATED CIRCUITS	
IC1201	BA9708K	IC, LINEAR POWER CONTROL	
IC9002	TA755558F85L	IC, LINEAR OP. AMP.	
IC9010	AN2537FHQ	IC, LINEAR RGB SIGNAL PROCESS	
		TRANSISTORS	
Q1201	DTA124EU	CHIP	
	OR MUN5112T1	CHIP	
	OR UN5112	CHIP	
Q1202	DTA124EU	CHIP	
	OR MUN5112T1	CHIP	
	OR UN5112	CHIP	
Q1203	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q1204	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q1205	2SB1628-T1ZX	CHIP	
	OR 2SB1628-TYZY	CHIP	
Q1206	2SB1424T100P	CHIP	
	OR 2SB1424T100Q	CHIP	
Q1207	2SB1424T100P	CHIP	
	OR 2SB1424T100Q	CHIP	
Q1209	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q1210	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q1211	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q1212	MSD1819A(R)	CHIP	
	OR 2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q1213	DTC124EU	CHIP	
	OR MUN5212T1	CHIP	
	OR UN5212	CHIP	
Q1214	2SK1958	F.E.T. CHIP	
Q1215	DTC144EU	CHIP	
	OR MUN5213	CHIP	
	OR UN5213	CHIP	
Q1216	DTA124EU	CHIP	
	OR MUN5112T1	CHIP	
	OR UN5112	CHIP	
Q1218	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
Q1219	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	

Ref. No.	Part No.	Part Name	Remarks
Q1220	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q1221	FMW1T148	COMPLX CMP SI NPN CHIP	
	OR XN1501	COMPLX CMP SI NPN CHIP	
Q9001	2SD1119	CHIP	△
	OR 2SD2150T100R	CHIP	△
Q9002	2SD1119	CHIP	△
	OR 2SD2150T100R	CHIP	△
Q9010	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
Q9014	XP4314	COMPLX CMP SI NPN/PNP CHIP	
Q9016	UMD12N	COMPLX CMP SI NPN/PNP CHIP	
Q9020	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 2SD1819A	CHIP	
	OR 2SD1819AI	CHIP	
		DIODES	
D1201	DAN202UT	CHIP	
	OR MA141WK	CHIP	
	OR MA142WK	CHIP	
	OR MA142WKI	CHIP	
D1202	DAP202UT	CHIP	
	OR MA141WA	CHIP	
	OR MA142WA	CHIP	
	OR MA142WAI	CHIP	
	OR M1MA142WA	CHIP	
D1204	MA720	CHIP	
	OR 5SB14-LT	CHIP	
D1205	MA720	CHIP	
	OR 5SB14-LT	CHIP	
D1206	MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D1207	MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D1209	DAN202UT	CHIP	
	OR MA141WK	CHIP	
	OR MA142WK	CHIP	
	OR MA142WKI	CHIP	
D1210	MA8068-L	ZENER CHIP	6.8V
D9004	MA728	CHIP	
D9005	MA728	CHIP	
D9006	MA728	CHIP	
		RESISTORS	
R1201	ERJ3GEYJ183V	MGF CHIP	1/16W 18K
R1202	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1204	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1206	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1207	ERJ3GEYJ824V	MGF CHIP	1/16W 820K
R1208	ERJ3GEYJ223V	MGF CHIP	1/16W 22K
R1209	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1210	ERJ3GEYJ223V	MGF CHIP	1/16W 22K
R1211	ERJ3GEYJ333V	MGF CHIP	1/16W 33K
R1212	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1213	ERJ3GEYJ222V	MGF CHIP	1/16W 2.2K
R1214	ERJ3GEYJ222V	MGF CHIP	1/16W 2.2K
R1215	VRJSD3D1801	MGF CHIP	+0.5% 1/16W 1.8K
R1216	VRJSD3D1801	MGF CHIP	+0.5% 1/16W 1.8K
R1217	VRJSD3D5101	MGF CHIP	+0.5% 1/16W 5.1K
R1218	ERJ3GEYJ223V	MGF CHIP	1/16W 22K
R1219	ERJ3GEYJ333V	MGF CHIP	1/16W 33K
R1220	VRJSD3D2700	MGF CHIP	+0.5% 1/16W 270
R1221	ERJ3GEYJ222V	MGF CHIP	1/16W 2.2K
R1222	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R1223	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R1224	ERJ3GEYJ470V	MGF CHIP	1/16W 47
R1225	ERJ3GEYJ470V	MGF CHIP	1/16W 47
R1226	ERJ3GEYJ390V	MGF CHIP	1/16W 39
R1227	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R1228	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1229	ERJ3GEYJ223V	MGF CHIP	1/16W 22K

Ref. No.	Part No.	Part Name	Remarks
R1230	ERJ3GEYJ561V	MGF CHIP	1/16W 560
R1232	ERJ3GEYJ562V	MGF CHIP	1/16W 5.6K
R1233	ERJ3GEYJ272V	MGF CHIP	1/16W 2.7K
R1234	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1235	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1236	VRJSD3D8201	MGF CHIP	+0.5% 1/16W 8.2K
R1237	VRJSD3D2701	MGF CHIP	+0.5% 1/16W 2.7K
R1238	VRJSD3D2200V	MGF CHIP	+0.5% 1/16W 220
R1239	VRJSD3D9101	MGF CHIP	+0.5% 1/16W 9.1K
R1240	VRJSD3D2701	MGF CHIP	+0.5% 1/16W 2.7K
R1241	VRJSD3D1800	MGF CHIP	+0.5% 1/16W 180
R1242	ERJ3GEYJ100V	MGF CHIP	1/16W 10
R1243	VRJSD3D2702	MGF CHIP	+0.5% 1/16W 27K
R1244	VRJSD3D2701	MGF CHIP	+0.5% 1/16W 2.7K
R1245	VRJSD3D1503	MGF CHIP	+0.5% 1/16W 150K
R1246	ERJ3GEYJ273V	MGF CHIP	1/16W 27K
R1247	ERJ3GEYJ683V	MGF CHIP	1/16W 68K
R1248	ERJ3GEYJ472V	MGF CHIP	1/16W 4.7K
R1249	ERJ3GEYJ472V	MGF CHIP	1/16W 4.7K
R1250	ERJ3GEYJ473V	MGF CHIP	1/16W 47K
R1251	ERJ3GEYJ473V	MGF CHIP	1/16W 47K
R1252	ERJ3GEYJ223V	MGF CHIP	1/16W 22K
R1253	ERJ3GEYJ473V	MGF CHIP	1/16W 47K
R1254	ERJ3GEYJ473V	MGF CHIP	1/16W 47K
R1255	ERJ3GEYJ105V	MGF CHIP	1/16W 1M
R1256	ERJ3GEYJ472V	MGF CHIP	1/16W 4.7K
R1257	ERJ3GEYJ472V	MGF CHIP	1/16W 4.7K
R1258	VRJSD3D1002	MGF CHIP	+0.5% 1/16W 10K
R1259	VRJSD3D2702	MGF CHIP	+0.5% 1/16W 27K
R1262	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R1263	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1267	VRJSD3D1002	MGF CHIP	+0.5% 1/16W 10K
R1269	VRJSD3D1002	MGF CHIP	+0.5% 1/16W 10K
R1270	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R1271	ERJ3GEYJ100V	MGF CHIP	1/16W 10
R1272	ERJ8GEY0R00V	MGF CHIP	1/8W 0 ●
R9002	ERJ3GEYJ102V	MGF CHIP	1/16W 1K
R9004	ERJ8GEY0R00V	MGF CHIP	1/8W 0 ●
R9005	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9010	ERJ3GEYJ223V	MGF CHIP	1/16W 22K
R9011	ERJ3GEYJ223V	MGF CHIP	1/16W 22K
R9012	ERJ3GEYJ223V	MGF CHIP	1/16W 22K
R9014	ERJ3GEYJ102V	MGF CHIP	1/16W 1K
R9015	ERJ3GEYJ102V	MGF CHIP	1/16W 1K
R9016	ERJ3GEYJ102V	MGF CHIP	1/16W 1K
R9017	ERJ3GEYJ561V	MGF CHIP	1/16W 560
R9018	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9019	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9020	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9021	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9022	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9023	ERJ3GEYJ153V	MGF CHIP	1/16W 15K
R9024	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9025	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9026	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9027	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9028	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9029	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9033	ERJ3GEYJ101V	MGF CHIP	1/16W 100
R9034	ERJ3GEYJ101V	MGF CHIP	1/16W 100
R9035	ERJ3GEYJ101V	MGF CHIP	1/16W 100
R9038	ERJ3GEYJ473V	MGF CHIP	1/16W 47K
R9046	ERJ3GEYJ333V	MGF CHIP	1/16W 33K
R9047	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R9048	ERJ3GEYJ103V	MGF CHIP	1/16W 10K
R9049	ERJ3GEYJ113V	MGF CHIP	1/16W 11K
R9050	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9051	ERJ3GEYJ682V	MGF CHIP	1/16W 6.8K
R9054	ERJ3GEYJ222V	MGF CHIP	1/16W 2.2K
R9055	ERJ3GEYJ222V	MGF CHIP	1/16W 2.2K
R9057	ERJ3GEY0R00V	MGF CHIP	1/16W 0 ●
R9058	ERJ3GEYJ473V	MGF CHIP	1/16W 47K
R9059	ERJ3GEYJ473V	MGF CHIP	1/16W 47K
R9060	ERJ3GEYJ223V	MGF CHIP	1/16W 22K
R9063	ERJ3GEYJ104V	MGF CHIP	1/16W 100K
R9064	ERJ3GEYJ473V	MGF CHIP	1/16W 47K
R9065	VRJSD3D3303V	MGF CHIP	+0.5% 1/16W 330K
R9066	VRJSD3D1003	MGF CHIP	+0.5% 1/16W 100K

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Ref. No.	Part No.	Part Name	Remarks
R9067	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R9073	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R9074	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R9075	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R9078	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R9079	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R9081	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R9082	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R9083	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R9088	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R9089	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
VR9001	VRVW0026	VARIABLE 10K	
		CAPACITORS	
C1201	ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	
C1203	VCUSQBA105KB	C CHIP 10V 1	
C1204	VCUSQBA105KB	C CHIP 10V 1	
C1205	ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	
C1206	VCUSQBC334KB	C CHIP 16V 0.33	
C1207	ECST1AY475N	TANTALUM CHIP 10V 4.7	
C1208	ECUV1H331JCV	C CHIP +-5% 50V 330P	
C1209	ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	
C1210	VCUSQBA105KB	C CHIP 10V 1	
C1211	ECST1CX106	TANTALUM CHIP 16V 10	
C1212	VCUSQFC106KB	C CHIP 16V 10	
C1213	ECUV1H472KBV	C CHIP 50V 4700P	
C1214	ECUV1E103KBV	C CHIP 25V 0.01	
C1215	ECUV1H221KBV	C CHIP 50V 220P	
C1216	ECUV1H221KBV	C CHIP 50V 220P	
C1217	VCUSQBA105KB	C CHIP 10V 1	
C1218	VCUSQBA105KB	C CHIP 10V 1	
C1219	ECUV1H472KBV	C CHIP 50V 4700P	
C1220	VCUSQBA105KB	C CHIP 10V 1	
C1221	ECUV1C104KBV	C CHIP 16V 0.1	
C1222	VCUSQAA335KB	C CHIP 10V 3.3	
C1223	ECST1AY106	TANTALUM CHIP 10V 10	
C1224	ECUV1H471KBV	C CHIP 50V 470P	
C1225	VCUSQAC225KB	C CHIP 16V 2.2	
C1226	ECST1AY475N	TANTALUM CHIP 10V 4.7	
C1227	ECUV1H681KBV	C CHIP 50V 680P	
C1228	VCUSQBA105KB	C CHIP 10V 1	
C1229	ECST1AY106	TANTALUM CHIP 10V 10	
C1231	VCUSQAE105KB	C CHIP 25V 1	
C1232	VCUSQAV105ZF	C CHIP +80%-20% 35V 1	
C1233	VCUSQAC225KB	C CHIP 16V 2.2	
C1234	ECUV1H221KBV	C CHIP 50V 220P	
C1235	ECUV1H102KBV	C CHIP 50V 1000P	
C1236	ECUV1E103KBV	C CHIP 25V 0.01	
C1237	VCUSQAC105KB	C CHIP 16V 1	
C1238	MCUV1C105ZFM	C CHIP +80%-20% 16V 1	
C9001	EEFCD0J220R	TANTALUM CHIP 6.3V 22	
C9004	ECU1H153JB5	C CHIP +-0.5% 50V 0.015	
C9005	VCCW0008	C CHIP	
C9010	ECUV1E103KBN	C CHIP 25V 0.01	
C9011	NMA0J226MTR	ELECTROLYTIC CHIP 6.3V 22	
C9012	ECUV1C104KBV	C CHIP 16V 0.1	
C9013	VCUSQEJ105KB	C CHIP 6.3V 1	
C9014	VCUSQEJ105KB	C CHIP 6.3V 1	
C9015	ECST0JY475	TANTALUM CHIP 6.3V 4.7	
C9016	ECST0JY475	TANTALUM CHIP 6.3V 4.7	
C9017	VCUSQEJ105KB	C CHIP 6.3V 1	
C9018	ECUV1C104KBV	C CHIP 16V 0.1	
C9019	ECUV1H681KBV	C CHIP 50V 680P	
C9020	ECUV1C104KBV	C CHIP 16V 0.1	
C9021	ECUV1C104KBV	C CHIP 16V 0.1	
C9022	ECUV1C104KBV	C CHIP 16V 0.1	
C9023	NMA0J226MTR	ELECTROLYTIC CHIP 6.3V 22	
C9024	ECUV1C104KBV	C CHIP 16V 0.1	
C9025	VCUSQBA225KB	C CHIP 10V 2.2	
C9026	VCUSQBA225KB	C CHIP 10V 2.2	
C9027	ECUV1H103KBV	C CHIP 50V 0.01	
C9028	VCUSQBA225KB	C CHIP 10V 2.2	
C9029	ECUV1H152KBV	C CHIP 50V 1500P	
C9030	ECST1AY225	TANTALUM CHIP 10V 2.2	
C9031	ECST1AX106	TANTALUM CHIP 10V 10	
C9032	VCUSQBA225KB	C CHIP 10V 2.2	
C9033	VCUSQBA225KB	C CHIP 10V 2.2	

Ref. No.	Part No.	Part Name	Remarks
C9034	ECUV1H151JCV	C CHIP +-5% 50V 150P	
C9035	VCUSQBC105KB	C CHIP 16V 1	
C9036	VCUSQBC105KB	C CHIP 16V 1	
C9038	ECUV1H103KBV	C CHIP 50V 0.01	
C9039	ECUV1C104KBV	C CHIP 16V 0.1	
C9040	ECST0JY106	TANTALUM CHIP 6.3V 10	
C9041	ECST0JY106	TANTALUM CHIP 6.3V 10	
C9042	VCUSQBC105KB	C CHIP 16V 1	
C9043	ECUV1C104KBV	C CHIP 16V 0.1	
C9047	VCUSQBA225KB	C CHIP 10V 2.2	
C9049	ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	
C9050	ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	
C9051	ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	
C9052	VCUSQEJ105KB	C CHIP 6.3V 1	
C9054	ECUV1C104KBV	C CHIP 16V 0.1	
		COILS	
L1201	NP05DB100M	+20%	10
L1202	NP05DB100M	+20%	10
L1204	VLQ0319K100	CHIP	10
L1206	VLQ0426J470	CHIP +-5%	47
L1207	VLQ0426J470	CHIP +-5%	47
L1208	VLQ0426J470	CHIP +-5%	47
L9001	SLF6028T680M	CHOKE +20%	68 Δ
L9010	VLQ0319K220	CHIP	22
L9011	VLQ0426J150	CHIP +-5%	15
L9012	VLQ0426J150	CHIP +-5%	15
L9013	VLQ0426J150	CHIP +-5%	15
L9014	VLQ0426J150	CHIP +-5%	15
L9015	VLQ0426J150	CHIP +-5%	15
L9016	VLQ0426J150	CHIP +-5%	15
		FPC CONNECTOR	
FP1201	VJS3971D021	FPC CONNECTOR 21P	
FP1202	VJS4012D005	FPC CONNECTOR 5P	
FP9001	VJS4012D024	FPC CONNECTOR 24P	
		TRANSFORMER	
T1201	VTPW0008		
T1202	VTPW0009		
T9001	VLTW0053		Δ
		MISCELLANEOUS	
E44	VMZW0650	INSULATION SHEET, PLASTIC	
		ELECTRONIC VIEWFINDER C.B.A. (A,B)	■
		INTEGRATED CIRCUITS	
IC901	AN2515NS	IC, LINEAR EVF DRIVE	
		TRANSISTORS	
Q906	2SD968A(S)	CHIP	Δ
Q907	MSB1218A(R)	CHIP	
	OR 2SA1576T106R	CHIP	
	OR 2SB1218A	CHIP	
	OR 2SB1218AI	CHIP	
		DIODES	
D901	SFPL-52V	CHIP	
		RESISTORS	
R901	ERJ6GEYJ4R7V	MGF CHIP 1/10W 4.7	
R905	ERJ3GEYK3R9V	MGF CHIP +-10% 1/16W 3.9	
R911	ERJ3GEYJ514V	MGF CHIP 1/16W 510K	
R912	ERJ3GEYJ242V	MGF CHIP 1/16W 2.4K	
R914	VRJSD301203V	MGF CHIP +-0.5% 1/16W 120K	

[illegible]

Ref. No.	Part No.	Part Name	Remarks
		COLOR ELECTRONIC VIEWFINDER A C.B.A. (C)	
		INTEGRATED CIRCUITS	
IC901	AN2522NFHP	IC, LINEAR EVF DRIVE	
IC904	TC7S04FTE85R	IC, CMOS STANDARD LOGIC INVERTOR GATE	E.S.D.
		TRANSISTORS	
Q902	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
Q904	FMW1T148	COMPLX CMP SI NPN CHIP	
	OR XN1501	COMPLX CMP SI NPN CHIP	
Q905	2SA1037K146R	CHIP	
	OR 25B709	CHIP	
	OR 25B709A	CHIP	
	OR 25B709AI	CHIP	
Q907	MSB1218A(R)	CHIP	
	OR 25A1576T106R	CHIP	
	OR 25B1218A	CHIP	
	OR 25B1218AI	CHIP	
Q909	MSD1819A(R)	CHIP	
	OR 25C4081T106R	CHIP	
	OR 25D1819A	CHIP	
	OR 25D1819AI	CHIP	
		DIODES	
D901	MA110	CHIP	
	OR MA111	CHIP	
	OR 15S355TE-17	CHIP	
		RESISTORS	
R907	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R908	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R909	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R910	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R911	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R912	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R913	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R922	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R923	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R924	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R925	VRJSD3D2702	MGF CHIP +-0.5% 1/16W 27K	
R926	VRJSD3D3001	MGF CHIP +-0.5% 1/16W 3K	
R927	VRJSD3D2202	MGF CHIP +-0.5% 1/16W 22K	
R928	VRJSD3D1802	MGF CHIP +-0.5% 1/16W 18K	
R929	VRJSD3D8201	MGF CHIP +-0.5% 1/16W 8.2K	
R930	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R931	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R935	VRJSD3D6800	MGF CHIP +-0.5% 1/16W 680	
R941	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R942	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R943	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R944	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R948	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R949	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R951	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R953	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R954	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R957	ERJ3GEYJ201V	MGF CHIP 1/16W 200	
R958	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R959	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
		CAPACITORS	
C904	ECEV1EA4R7S	ELECTROLYTIC CHIP 25V 4.7	
C905	ECUV1H222K8V	C CHIP 50V 2200P	
C906	ECEV1EA4R7S	ELECTROLYTIC CHIP 25V 4.7	
C907	ECUV1H152K8V	C CHIP 50V 1500P	
C908	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	

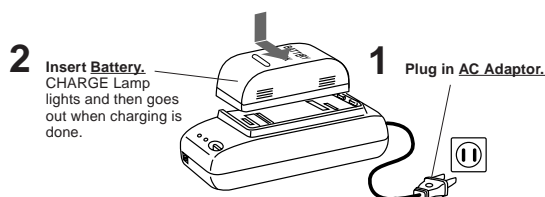
[illegible][illegible]

OPERATION GUIDE

Quick Operation Guide

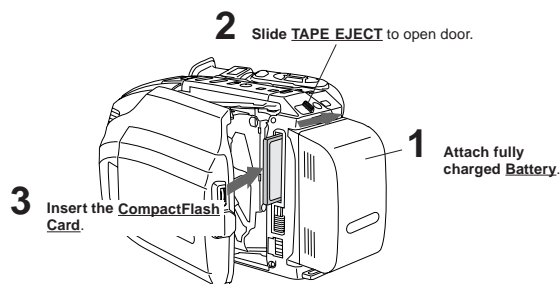
Charge the Battery Pack

Charge Battery Pack fully before operation.

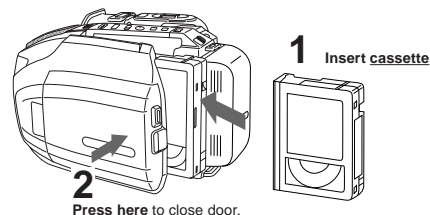


Insert the CompactFlash Card

When the CompactFlash Card is not inserted in CAMERA or PHOTO mode, "NO CF CARD" appears on-screen. Be sure to insert the CompactFlash Card before using the Built-in Digital Still Camera. CAMERA recording is possible even when the CompactFlash Card is not inserted.

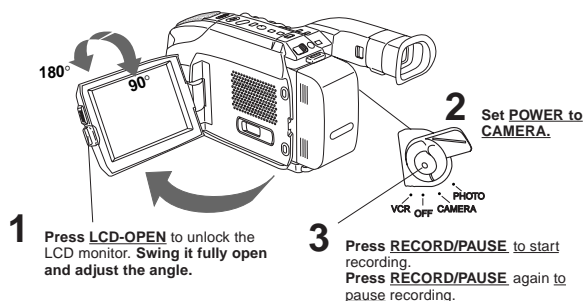


Insert Cassette



Camera Recording

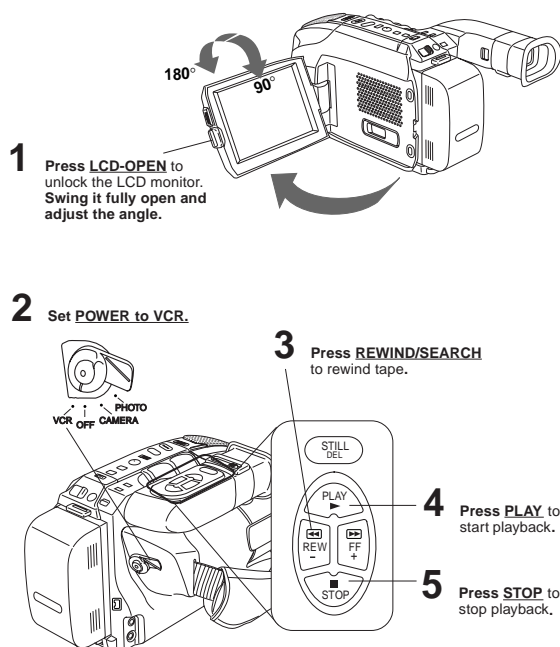
When the LCD monitor is fully open, the Viewfinder automatically turns OFF.



Quick Operation Guide (continued)

Playback using the LCD Monitor

When the LCD monitor is fully open, the Viewfinder automatically turns OFF.



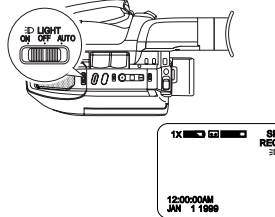
Before you begin...

- Charge Battery Pack fully before operation.

Built-in Auto Light

Using the Light

For recording in dim lighting.



Before you begin...

- Connect Camcorder to power source.
- Set POWER to CAMERA.

Set LIGHT to AUTO.

Light turns on/off automatically according to lighting conditions.

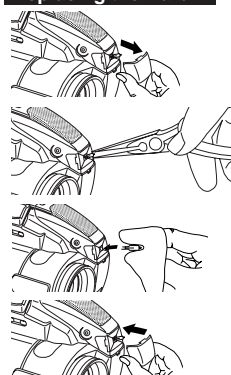
Or, set LIGHT to ON/OFF manually.

3D appears in EVF when Light is on.

Caution:

Light becomes hot. Never cover Light while on.

Replacing the Bulb



Before you begin...

- Order Part No. VULS0001 (VLLW0015 and cushions) for replacement bulb unit.
- Set POWER to OFF.

- 1** Press in on both sides of lens cover and pull straight out and off.
- 2** Using Tweezers or needle-nose pliers, carefully remove bulb.
 - Take unit to service center if you need assistance.
- 3** Replace bulb using a clean cloth or tissue.
- 4** Replace lens cover.

DANGER:

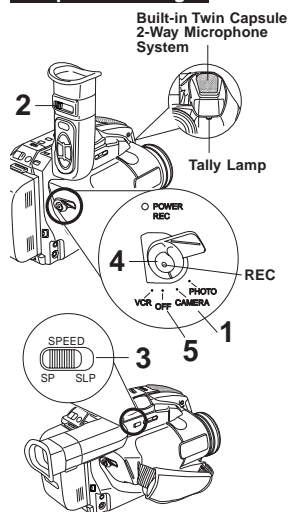
Use only replacement bulb (PART NO. VLLW0015) supplied by Panasonic to reduce risk of fire. Handle new bulb with cloth or tissue as skin oils will decrease bulb life. Remove lens cover and allow bulb to cool before replacing to avoid possible burn hazard.

Note:

- Using Light reduces battery operating time.
- Provide proper ventilation when using Light extensively in a hot environment.
- Using Light when the Camcorder is powered by a car battery may shorten bulb life.
- Set Light to OFF when not in use.
- Handle bulb gently. Excessive force may cause bulb to crack.

Camera Recording

Simple Recording



WARNING:

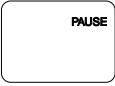
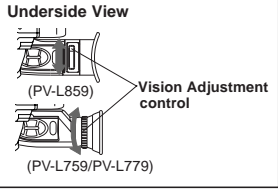

- Do not leave the camcorder with the EVF aimed directly at the sun. This may cause damage to the internal parts of the EVF.



- When Camcorder is aimed at excessively bright objects, or bright lights, a vertical bar may appear in the picture. This is normal for the CCD pick-up. Try to avoid this when possible.

Before you begin...

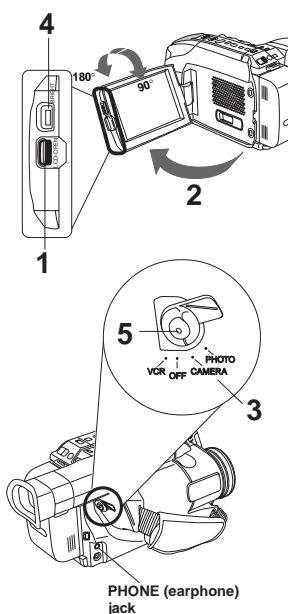
- Connect Camcorder to power source.
- Insert cassette with record tab.

- Set POWER to CAMERA.**
Lens Cover opens.
• Be sure POWER is fully turned to CAMERA position.

Record/Pause mode.
- Look into Viewfinder and adjust Vision Adjustment control to your eyesight.**

- Slide TAPE SPEED to SP or SLP.**
- Press RECORD/PAUSE** to start or pause recording.
REC lamp lights during recording. Tally lamp also lights if set to ON.

- Set Power to OFF** when finished.

- To remove cassette, slide TAPE EJECT in Record/ Pause mode.

Using the LCD Monitor

View recording scene on the LCD (Liquid Crystal Display).



Before you begin...

- Connect Camcorder to power source.
- Insert cassette with record tab.

- Press LCD-OPEN** to unlock LCD.
- Swing LCD fully open and adjust viewing angle.**
Caution:
Rotating partially open LCD monitor may block cassette door and damage Camcorder body.
- Set POWER to CAMERA.**
• LCD monitor turns off/on by the POWER switch.
• Viewfinder shuts off when LCD is fully opened and turns back on when LCD is closed completely.
• Both Viewfinder and LCD monitor turn on when LCD is at 180° (see above left).
This allows both you and the subject to view the recording.
- Turn BRIGHT control** to adjust LCD brightness level.
- Press RECORD/PAUSE** to start recording.

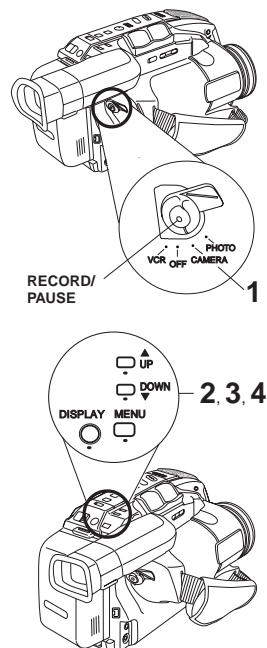
Note:

- Using LCD reduces battery operation time.
- To hear sound while recording, connect earphone (M3 type; not supplied) to PHONE jack. Earphone volume cannot be changed while in CAMERA mode.
- Lock LCD closed when not in use.

Camera Recording (continued)


Stand-by Quick Release

If left in RECORD/PAUSE mode for 5 minutes, Camcorder switches to Stand-by mode to conserve battery. When set to ON, Stand-by Quick Release lets you resume recording by pressing RECORD/PAUSE two times. New camcorders will default to OFF.



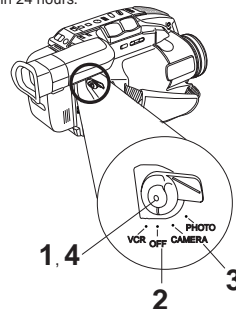
Before you begin...

- Connect Camcorder to power source.
- Insert cassette with record tab.

- Set POWER to CAMERA.**
- Press MENU for MENU mode.**
Press UP ▲ or DOWN ▼ to select **STAND-BY RELEASE**.

- Press DISPLAY** to select ON/OFF.
ON: From Stand-by mode, press RECORD/PAUSE two times to resume recording.
OFF: From Stand-by mode, set POWER to OFF, then to CAMERA. Press RECORD/PAUSE to record.
- Press MENU** to exit.

Easy Edit Stand-by

For a smooth transition between scenes if recording is stopped, and then started within 24 hours.



Before you begin...

- Connect Camcorder to power source.
- Insert cassette with record tab.

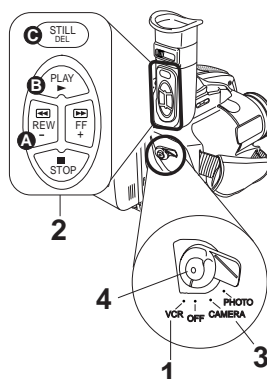
- Press RECORD/PAUSE** to stop recording.
- Set POWER to OFF** and leave cassette in Camcorder.
- To resume recording, **set POWER to CAMERA.**
- Press RECORD/PAUSE** to resume recording.

Note:

- Use Manual Easy Edit (below) if more than 24 hours before recording is resumed.

Manual Easy Editing

For proper continuity when taping from Stop mode or after attaching a new Battery.



Before you begin...

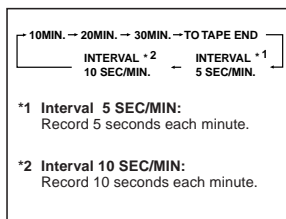
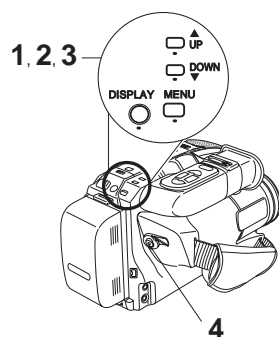
- Connect Camcorder to power source.
- Insert cassette with record tab.

- Set POWER to VCR.**
- Press REWIND/SEARCH** to rewind a few seconds of tape.
Press PLAY to review recording.
Press STILL where you want to continue recording.
- Set POWER to CAMERA.**
- Press RECORD/PAUSE** to resume recording.

Camera Recording (continued)

Programmed Recording

Set a recording start and stop time. Or, set a 5 or 10 second interval recording to be done each minute.



- Note:**
- Start time may not be set over 24 hours from current time.
 - Camcorder shuts off at tape end, or 12 hours after Interval Recording starts.
 - To cancel, set POWER to OFF.

Before you begin...

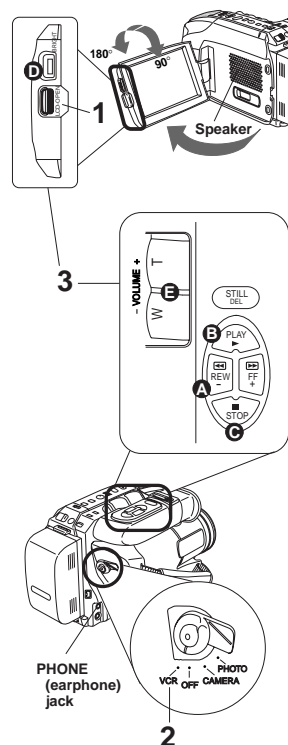
- Connect Camcorder to power source. Use AC Adaptor for longer recordings.
- Insert cassette with record tab.
- Set POWER to CAMERA.

- Press **MENU** for MENU mode. Press **UP** or **DOWN** to select **PROGRAMMED REC.**
- Press **DISPLAY**. (Current time is displayed.) Each additional press of **DISPLAY** increases start time by 30 minutes.
- Press **DOWN** to select **REC TIME**. Press **DISPLAY**, repeatedly to select one of the options shown at the left.
- Press **RECORD/PAUSE** to place Camcorder in stand-by mode.

Recording will be done as scheduled.

Playing Back Recordings

Playback on EVF or LCD Monitor



Before you begin...

- Connect Camcorder to power source.
- Insert recorded tape.

- Press **LCD-OPEN** and swing LCD monitor fully open.
 - If you want to playback on EVF, close and lock LCD completely.
- Set **POWER** to **VCR**.
 - If tape has no record tab, auto playback begins.
 - LCD monitor turns on/off by the POWER switch.
 - Viewfinder shuts off when LCD is fully opened and turns back on when LCD is locked shut.
 - Return LCD monitor to locked position when not in use.
- Playback function buttons.
 - A REW(ind)**: Rewind tape.
 - B PLAY**: Play tape.
 - C STOP**: Stop tape.
 - D BRIGHT**: Adjust LCD brightness.
 - E VOLUME**: Adjust volume of speaker, or earphone if connected.

Press "T": Volume up(+).
Press "W": Volume down(-).

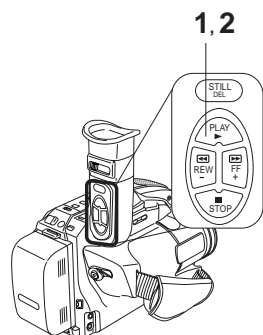
Note:

- Using LCD reduces battery operating time.
- When earphone (M3 type: not supplied) is connected to PHONE jack, speaker is muted.

Playing Back Recordings (continued)

1/2 Slow Play (PV-L859/PV-L779)

Available only with SP recordings made on this Palmcorder.



Before you begin...

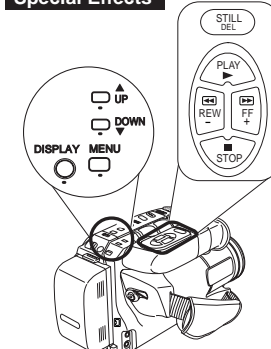
- Connect Palmcorder to power source.
- Insert tape recorded in SP mode.
- Set POWER to VCR.

- During playback, press **PLAY** for 1/2 Slow Play mode. Audio is muted.
 - Picture noise will occur in 1/2 slow play.
 - If the recorded speed changes from SP to SLP, normal speed playback is resumed.
- Press **PLAY** again to resume normal speed playback.

Note:

- Vertical jitter may occur during playback.
- Skew may occur at top of picture.

Special Effects



Note:

- During search, horizontal noise bars will appear. Audio is muted.
- To protect video heads and tape, operating modes will revert as follows after 5 minutes: Still → Stand-by; Stand-by → Power off (when Battery Pack is used).
- Tape auto-rewinds if played or fast forwarded to end.

Tracking Control

Before you begin...

- Connect Palmcorder to power source.
- Insert recorded tape.
- Set POWER to VCR.

Quick Visual Search

Search Speed

SP (Standard Play) : 3 times normal.
SLP (Super Long Play) : 9 times normal.

During playback, press:
FF : fast forward search
REW : rewind search
Press again or **PLAY** for normal play.

Still Picture

Press **STILL** to freeze picture.
Press again for normal play.
This feature works best in SLP mode.

Auto Tracking

Continuously analyzes each recording for optimum picture quality.

Manual Tracking

Some recordings require manual adjustment to reduce noise.

In Playback mode:

Press **UP** or **DOWN** until Playback picture clears up.

Press **DISPLAY** to return to Auto Tracking.

In Still mode: (PV-L859 only)

Press **UP** or **DOWN** until Still picture clears up.

Press **DISPLAY** to return to Auto Tracking.

V-Lock Control (PV-L859 only)

Reduces jitter in Still mode.

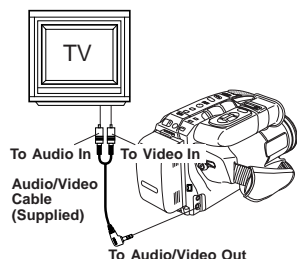
Hold down **DISPLAY** and **UP** or **DOWN** until picture is stable.

Playing Back Recordings (continued)

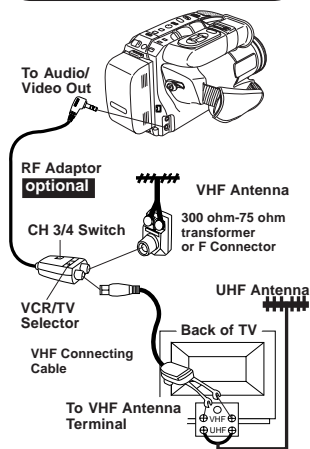
TV Playback or Viewing

Connect Camcorder to a TV to view playback or recordings in progress.

TV with AUDIO/VIDEO IN Jacks.



TV without AUDIO/VIDEO IN Jacks.



Before you begin...

- Connect Camcorder to power source.
- Make all TV-Camcorder connections.

- 1 Set POWER to:
VCR → view playback.
CAMERA → view picture as it is recorded.
- 2 Turn TV ON and set to LINE INPUT.
See TV owner's manual.
- 3 Begin playback or recording.

If TV has no VIDEO/AUDIO IN jacks, connect **PV-RF16 RF Adaptor** (optional). Tune TV to CH 3 or 4 to match RF Adaptor 3/4 switch. Set Adaptor's TV/VCR switch to VCR for playback.

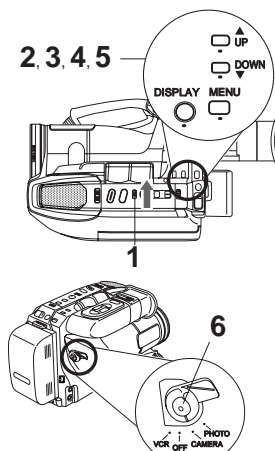
To watch TV only, turn TV on without AUDIO/VIDEO IN Jacks connected (left).
a. Set Camcorder POWER to OFF.
b. Set RF Adaptor VCR/TV Selector to TV.
c. Turn TV ON and select channel.

CATV System Installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC in USA (and to the Canadian Electrical Code in Canada) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Color Digital Filter

Digital Filter adds one of 5 colors to entire picture, like a color filter.



Before you begin...

- Connect Camcorder to power source.
- Set POWER to CAMERA.

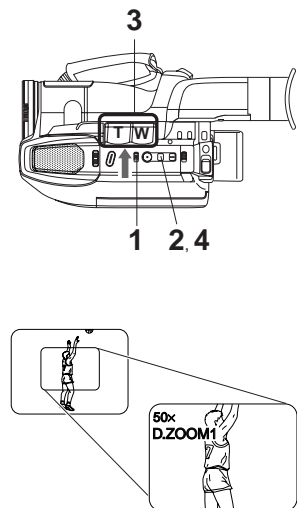
- 1 Slide **DIGITAL SELECT** to **FADE**.
- 2 Press **MENU** for MENU mode.
Press **UP ▲** or **DOWN ▼** to select **VIDEO EFFECTS**.
- 3 Press **DISPLAY** for VIDEO EFFECTS menu.
Press **DOWN ▼** to select **DIGITAL FILTER**.
- 4 Press **DISPLAY** for DIGITAL FILTER menu. Press **UP ▲** or **DOWN ▼** to select from 5 colors.
- 5 Press **DISPLAY** to confirm entry.
Press **MENU** to exit.
- 6 Start recording.

Note:

- Color Digital Filter will not function during Digital Wipe mode, Picture in Picture Wipe Title or Still/Strobe/Wide.
- Picture returns to normal in Still mode.

Digital Zoom

Power Zoom magnification is digitally increased.



Before you begin...

- Connect Camcorder to power source.
- Set POWER to CAMERA.

- 1 Slide **DIGITAL SELECT** to **D.ZOOM**.
- 2 Press **D. ZOOM**.
once → D.ZOOM 1 (150× maximum)
twice → D.ZOOM 2 (300× maximum)
Higher digital magnification levels may cause picture distortion.
- 3 Hold down **"T"** on **POWER ZOOM**.
Digital Zoom starts when normal zoom reaches maximum (26×).
• Zoom level appears in EVF.
• POWER ZOOM switch controls digital zoom level.
• Normal zoom resumes when level falls to 26×.
- 4 Press **D. ZOOM** to turn off Digital Zoom so no indication appears.

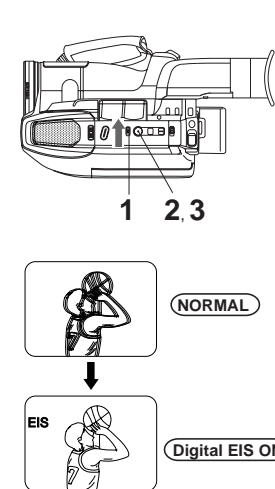
Note:

- If "NOW IN DIGITAL WIPE" is displayed when D. ZOOM is pressed, DIGITAL SELECT is currently in DIGITAL WIPE mode and the DIGITAL ZOOM feature is not available.

Digital E.I.S.

Digital Electronic Image Stabilization (E.I.S.)

Helps stabilize picture when recording in unstable situations.



Before you begin...

- Connect Camcorder to power source.
- Set POWER to CAMERA.

- 1 Slide **DIGITAL SELECT** to **EIS**.
- 2 Press **EIS** to display "EIS" in the EVF.
• The shutter speed auto-adjusts from 1/80 to 1/350 according to brightness.
• Use High Speed Shutter if needed. Shutter speed setting remains after EIS is canceled.
- 3 Press **EIS** again to cancel when not in use.

E.I.S. may not function during...

- extreme Camcorder movement.
- recording of subject with distinct horizontal or vertical stripes.
- low light situations (EIS indicator flashes).
- intense fluorescent lighting situations.
- recording of very fast motion.

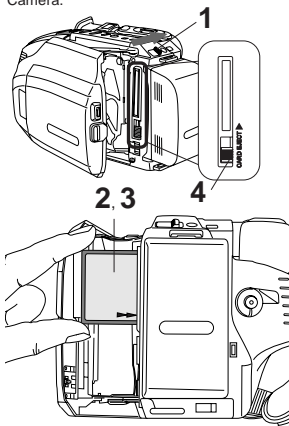
Note:

- If "NOW IN DIGITAL WIPE" is displayed when EIS is pressed, DIGITAL SELECT is currently in DIGITAL WIPE mode and the Digital E.I.S. feature is not available.

Digital Still Camera

CompactFlash Card Insertion/ Removal

The captured images will be stored on this CompactFlash Card. Be sure to insert the CompactFlash Card before using the Built-in Digital Still Camera.



Concerning the CompactFlash Card

- Except for some special features, this card is compatible with other Panasonic brand products, like Digital Camera (PV-DC1080, PV-DC1580), LCD Projector (PT-L556U).
- Panasonic only guarantees compatibility with Panasonic brand cards and those bearing the SanDisk logo.
- This Camcorder can capture a maximum of 400 still images. A larger CF card (optional) is required to capture 400 images.

Before you begin...

- Connect Camcorder to power source.
- Set POWER to OFF.

- Slide **TAPE EJECT** to open door.
- Insert the **CompactFlash Card** into the CompactFlash Card Slot in the direction of the arrow. The side of the card with the arrow faces the back (battery side) of the camcorder (see the picture at the left).
- Push the card fully into the Slot.
- Slide **CARD EJECT**, to release the card.

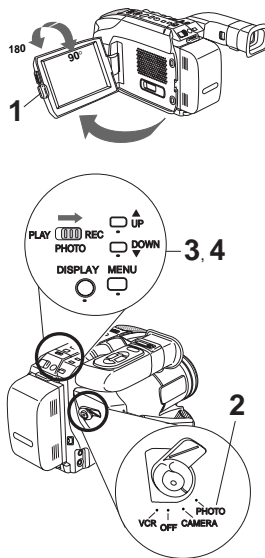
Note:

- If CompactFlash Card is not inserted, "NO CF CARD" appears on-screen.
- Do not insert card in wrong direction.
- If card does not eject after sliding CARD EJECT, push card fully back into slot, then firmly slide the CARD EJECT again.
- To avoid dropping the card, do not slide CARD EJECT when the card slot is facing downward.
- If "CF CARD ERROR" appears on-screen.

CAUTION:

- Do not bend, drop, apply high pressure or subject the card to strong shocks.
- Do not store it in places with high temperature, high humidity, a lot of dust, or places exposed to direct sunlight, or static electricity and strong electromagnetic waves.
- Keep the card's contacts free from dust, water or other foreign substances. Do not touch them with your fingers, etc.
- Do not disassemble or deform the card.
- Be sure to make a backup copy of important data.
- Do not affix other labels to the CompactFlash Card face or back as Card insertion/removal may become impossible.

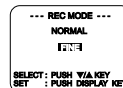
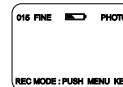
Recording



Before you begin...

- Connect Camcorder to power source.
- Insert the CompactFlash Card.

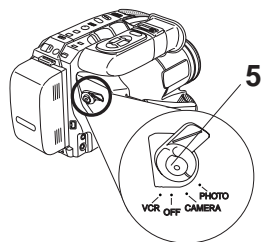
- Press **LCD-OPEN** and swing LCD monitor fully open. Adjust viewing angle.
- Set **POWER** to **PHOTO**. Built-in Lens Cover opens and **POWER** Lamp lights. Be sure **POWER** is fully rotated to **PHOTO** position.
- Slide **PHOTO MODE** to **REC**.
- Press **MENU** for **REC Mode**. Press **UP** or **DOWN** to select **NORMAL** or **FINE**. Then, press **DISPLAY** to set.



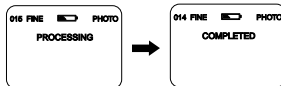
Note:

Please note that the included 2MB CompactFlash Card already contains 12 pre-recorded titles for your use. Please see page 62 for further details.

Digital Still Camera (continued)



- Press **RECORD** to capture image.
 - As the image is processed, the status screens below appear. The next image may be captured after "COMPLETED" disappears.
 - Depending on the image taken, the image page remaining indication may not change, or it may be decreased by 2 images.



- For sharper images, set electronic shutter to higher speed when shooting in bright conditions, such as outdoors.

Note:

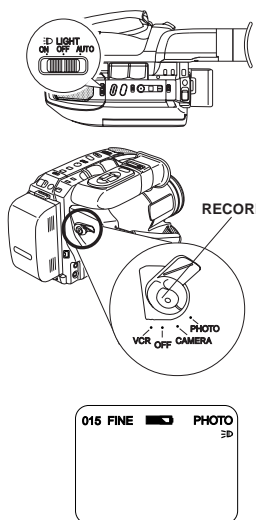
- If CompactFlash Card is not inserted, "NO CF CARD" appears on-screen. Set **POWER** to **OFF**, then insert the CompactFlash Card.
- If "CF CARD ERROR" appears on-screen.
- Sound will not be recorded.
- The features below are not available while in **PHOTO** mode.
 - Auto Fade
 - Digital Zoom
 - Security Mode
 - Intelligent Titler
 - Digital Fade
 - Digital E.I.S.
 - Time Lapse
 - Digital Wipe Mode
 - Color Digital Filter
 - Still/Strobe/Wide
 - Message Mode
 - Picture in Picture Wipe Title

WARNING:

Do not, under any circumstances, remove the card immediately after pressing the **RECORD/PAUSE** (during recording of an image) or while deleting. This could damage the format of the card and make it unusable.

Using the Light

For capture of still images in dim lighting.



Before you begin...

- Connect Camcorder to power source.
- Insert the CompactFlash Card.
- Set **POWER** to **PHOTO**.

Set **LIGHT** to **AUTO**.

When **RECORD** is pressed to capture an image in dim lighting, the Light comes on for about 2 seconds, the image is captured, then goes out.

Or, set **LIGHT** to **ON/OFF** manually.

3D appears in EVF when Light is on.

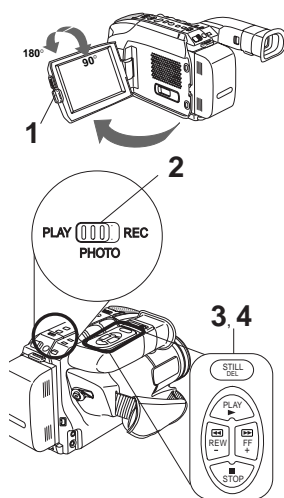
Caution: Light becomes hot. Never cover Light while on.

Note:

- Using Light reduces battery operating time.
- Provide proper ventilation when using Light extensively in a hot environment.
- Using Light when the Camcorder is powered by a car battery may shorten bulb life.
- Set Light to **OFF** when not in use.

Digital Still Camera (continued)

Playback



Note:

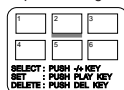
- If CompactFlash Card is not inserted, "NO CF CARD" appears on-screen. Set Power to OFF, then insert the CompactFlash Card.
- Pictures captured with other brand products cannot be used with this Camcorder.
- If "INCOMPATIBLE IMAGE" appears on-screen, the size of the captured image cannot be played back on this Camcorder.
- Do not change POWER setting to CAMERA or change recording mode while "PLEASE WAIT" is displayed.
- If "CF CARD ERROR" appears on-screen.

Before you begin...

- Connect Camcorder to power source.
- Insert the CompactFlash Card.
- Set POWER to PHOTO.

1 Press **LCD-OPEN** and swing LCD monitor fully open. Adjust viewing angle.

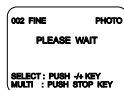
2 Slide **PHOTO MODE** to **PLAY**. The Multi Image Playback screen appears. The last captured image screen is underlined.



- If there are no recordings on the card, "NO PICTURE" appears on-screen.
- In NORMAL or FINE mode, the color of the Multi Image page number is as follows:
NORMAL mode → green
FINE mode → white

3 Press **+ (FF)** → next. Press **- (REW)** → previous. The selected image will be underlined in green. Continue pressing **+ (FF)** or **- (REW)** for next or previous page.

4 Press **PLAY** to display image. This screen appears followed by image.



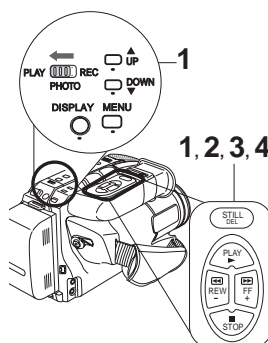
- Press **DISPLAY** to remove or redisplay this screen.
- Press **STOP** to redisplay Multi Image playback screen.

Deleting Specific Image Pages

Delete older images to make room for new ones.

Important:

Once deleted, images cannot be restored.



Note:

- Pictures captured with other brand products cannot be used with this Camcorder.
- If "CF CARD ERROR" appears on-screen.

WARNING:

Do not, under any circumstances, remove the card immediately after pressing the RECORD/PAUSE (during recording of an image) or while deleting. This could damage the format of the card and make it unusable.

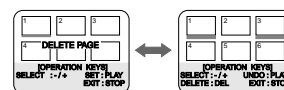
Before you begin...

- Connect Camcorder to power source.
- Insert the CompactFlash Card.
- Set POWER to PHOTO.
- Slide PHOTO MODE to PLAY.

1 Press **DEL(STILL)** for **DELETE** menu. Press **UP** or **DOWN** to select **PAGE**. To exit menu at any time, press **STOP**.



2 Press **DEL(STILL)** for Multi Image screen. Press **+ (FF)** or **- (REW)** to select image page. Press **PLAY** once to set. Or, press twice to undo. Press **+ (FF)** or **- (REW)** and **PLAY** repeatedly to select several pages at one time. The selected image will be underlined in green. You can delete images underlined in red.



3 Press **DEL(STILL)**. This message appears.



4 Press **DEL(STILL)** to delete the page. As image pages are deleted, page numbers adjust automatically.

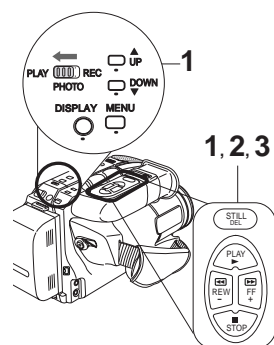
Digital Still Camera (continued)

Deleting All Image Pages

All image pages are deleted from memory.

Important:

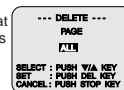
Once deleted, images cannot be restored.



Before you begin...

- Connect Camcorder to power source.
- Insert the CompactFlash Card.
- Set POWER to PHOTO.
- Slide PHOTO MODE to PLAY.

1 Press **DEL(STILL)** for **DELETE** menu. Press **UP** or **DOWN** to select **ALL**. To exit menu at any time, press **STOP**.



2 Press **DEL(STILL)**. This message appears.



3 Press **DEL(STILL)** to delete all pages. "NO PICTURE" appears on-screen after deletion.

Note:

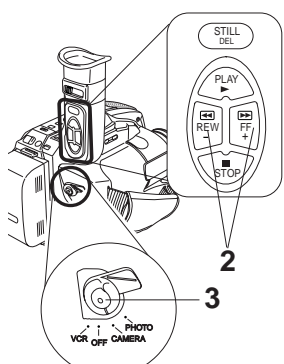
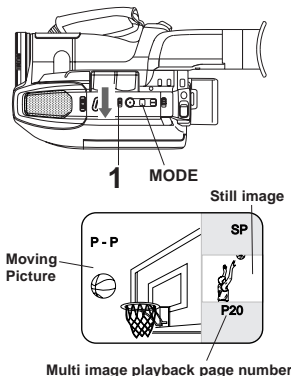
- Pictures captured with other brand products cannot be used with this Camcorder.
- If "CF CARD ERROR" appears on-screen.

WARNING:

Do not, under any circumstances, remove the card immediately after pressing the RECORD/PAUSE (during recording of an image) or while deleting. This could damage the format of the card and make it unusable.

Picture in Picture Wipe Title

Captured still images can be recorded along with the current picture.



Before you begin...

- Connect Camcorder to power source.
- Insert the CompactFlash Card.
- Set POWER to CAMERA.

(P - P = Picture in Picture)

1 Set **DIGITAL SELECT** to **DIGITAL WIPE**.

- A still image captured on the CF card and the Multi image playback page number is displayed on the right side of the screen.
- If there are no recordings on the card, "NO PICTURE" appears on-screen.

2 Press **+ (FF)** or **- (REW)** to select still image to be used.

3 Start recording.

- When recording starts, Multi image playback number disappears. Then the capture still images can be recorded along with the current picture.
- To exit from the Picture in Picture Wipe title mode, press **MODE**.

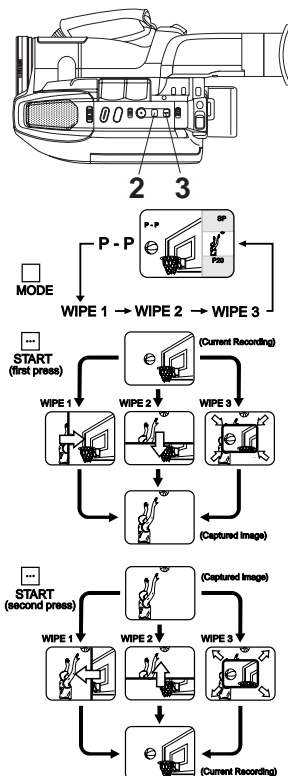
Note:

- If CompactFlash Card is not inserted, "NO CF CARD" appears on-screen. Set Power to OFF, then insert the CompactFlash Card.
- Pictures captured with other brand products cannot be used with this Camcorder.
- If "INCOMPATIBLE IMAGE" appears on-screen, the size of the captured image cannot be played back on this Camcorder.
- If "CF CARD ERROR" appears on-screen.
- If Picture in Picture Wipe Title selected, the following functions are not available: Security mode, Auto Fade, Digital Fade, Digital Filter, Digital Zoom, Digital E.I.S., Still/Strobe/Wide.

Digital Still Camera (continued)

Digital Wipe Mode

Insert a Captured still image into the current recording, or vice versa, in one of three wipe effects.



Before you begin...

- Connect Camcorder to power source.
- Insert the CompactFlash Card.
- Set POWER to CAMERA.

- 1 Repeat step 1 and 2 on page 60 to set Picture in Picture Wipe title.
- 2 Press **MODE** repeatedly for Wipe effect 1, 2, or 3 (See left).
 - WIPE 1 will flash for a while to store the image for the wipe.
- 3 Press **START**:
 - once** → inserts captured image.
 - twice** → inserts current recording picture.
 - You can freeze the wipe in progress by pressing **START**. Press **START** again to resume wipe.

Note:

- If CompactFlash Card is not inserted, "NO CF CARD" appears on-screen. Set Power to OFF, then insert the CompactFlash Card.
- Pictures captured with other brand products cannot be used with this Camcorder.
- If "INCOMPATIBLE IMAGE" appears on-screen, the size of the captured image cannot be played back on this Camcorder.
- If "CF CARD ERROR" appears on-screen.
- If Digital Wipe mode is selected, the following functions are not available: Security mode, Auto Fade, Digital Fade, Digital Filter, Digital Zoom, Digital E.I.S., Still/Strobe/Wide.

PhotoShot Title Library

The included 2MB CompactFlash Card already contains 12 pre-recorded titles. You can insert any one of the 12 included pre-recorded titles into your current video recording by following the steps outlined below.

CAUTION:
If you delete the following pre-recorded titles, they will not be restored.



Panasonic



Bon Voyage



It's a Girl!



Surprise!



Anniversary



Congratulations



It's a Boy!



The Wedding



Happy Birthday



Graduation



Our Wedding



Vacation!

Before you begin...

- Connect Camcorder to power source.
- Insert the CompactFlash Card.
- Set POWER to CAMERA.

- 1 Set **DIGITAL SELECT** to **DIGITAL WIPE**.
- 2 Press **± (FF)** or **- (REW)** to select still image to be used.
- 3 Start recording.

PC Connection

Digital PhotoShot Software

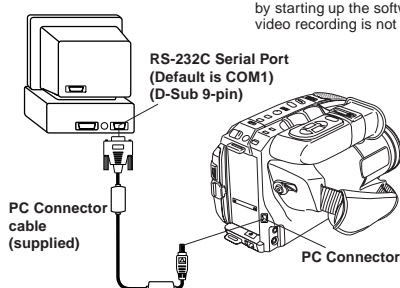
A live or captured image can be transferred to your PC (Personal Computer).

System Requirements for Digital PhotoShot

- IBM PC/AT or compatible.
- Intel® Pentium® Processor
- Microsoft Windows®95 or Windows®98.
- RAM: 16 MB or more
- 2 MB of available hard-disk space.
- 256 color monitor (full color recommended).
- 3.5 inch 1.44 MB floppy disk drive (for installation).
- RS-232C serial port (D-Sub 9-pin). An adaptor (D-Sub 9-pin male to a D-Sub female) is required for a D-Sub 25-pin.
- Mouse or other pointing device.

PC-Camcorder Connection

Connect Camcorder PC jack to the serial port on your PC (Personal Computer) using the supplied PC connector cable. Refer to PC or Windows manual to identify which COM port to be used for connection.



System Requirements for Adobe® PhotoDeluxe™ HE 3.0 (PV-L859 only)

- Intel® Pentium® Processor
- Microsoft Windows®95, Windows 98 or Windows NT®4.0.
- 32 MB of RAM for Windows 95 and Windows 98.
- 64 MB of RAM for Windows NT.
- 140 MB of available hard-disk space.
- Color monitor with thousands of colors.
- CD-ROM drive or DVD-ROM drive.

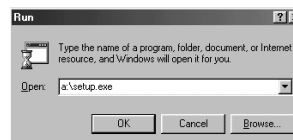
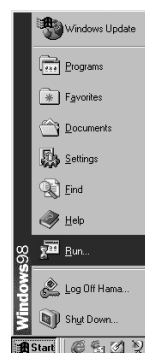
Before you begin...

- Turn your PC off.
- Set Camcorder POWER to OFF.

Note:

- Be sure to turn PC off before connection for properly image transfer.
- After Camcorder and PC are connected by starting up the software included, video recording is not possible.

Software Installation (Windows 95/98)



Before you begin...

- Your PC is in the power on mode.

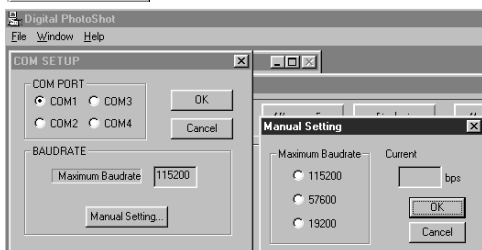
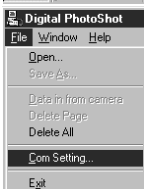
- 1 Turn on PC (Personal Computer) and start up Windows.
- 2 Insert Digital PhotoShot disk (Windows 95/98) into a floppy disk drive.
- 3 Click on Start, then "Run..."
- 4 Type in a:\setup.exe and click OK.
 - If your 3.5 inch floppy disk drive is not "A", use appropriate letter.
- 5 Follow instructions as they appear on PC screen until the installation is complete.
 - Setup window will disappear when the installation is complete.

Note:

- Please look for Windows NT version of driver software on our website at <http://www.panasonic.com/video>.

PC Connection (continued)

Running the Software (Windows 95/98)



Before you begin...

- Insert the CompactFlash Card.
- Make Camcorder-PC connections.
- Turn both units on.
- Set Camcorder POWER to PHOTO.

- 1 Click on Start, then "Programs," then "Digital PhotoShot."

- 2 "Digital PhotoShot" is opened.

Note:

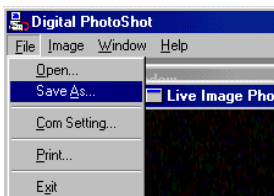
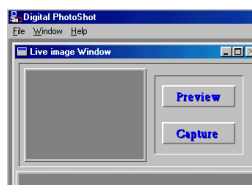
- If connection error message appears, confirm COM Port to be used for the connection with the Camcorder and correct COM Port selection as follows:
 - a Select File
 - b Select COM setting
 - c Select the correct COM Port
 - d Select OK

COM PORT: COM1, COM2, COM3 or COM4
(COM1 or COM2 is usually used.)

Refer to Help for information about application operation and other Error messages.

Using Live Image Data

You can capture the current Camcorder picture to your PC.



Before you begin...

- Insert the CompactFlash Card.
- Make Camcorder-PC connections.
- Turn both units on.
- Set Camcorder POWER to PHOTO.

- 1 Repeat step 1 and 2 to run the Software.
- 2 Click on "Window," then select "1 Live image Window."
- 3 Click on "Preview," then Click on "Capture."
 - Repeat this step to decide on an image.
 - Captured image is transferred to your PC when "Capture" is clicked on.
- 4 Click on "Window," then select "Live photo Zoom In."
- 5 Click on "File," then select "Save As."
 - Captured image is stored to your PC.

Note:

- If, while transferring the image to your PC, the displayed picture appears abnormal, restart the PC application and turn Camcorder POWER off, and then back on.

PC Connection (continued)

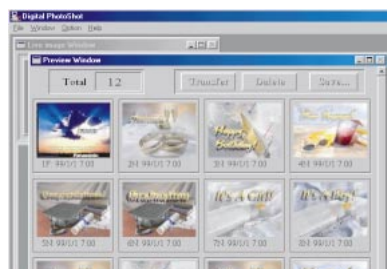
Using CF Card Image Data

Pictures captured with Camcorder can be transferred to your PC.

Before you begin...

- Insert the CompactFlash Card.
- Make Camcorder-PC connections.
- Turn both units on.
- Set Camcorder POWER to PHOTO.

- 1 Repeat step 1 and 2 to run the Software.
- 2 "Preview Window" screen appears.



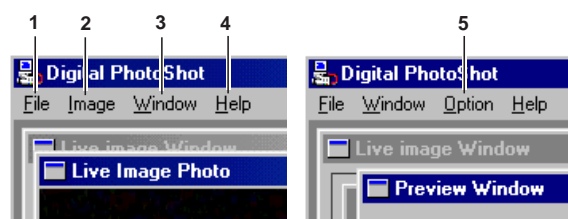
- 3 Select the image data you want to transfer to your PC.
 - The selected image will be underlined in green.

- 4 Click on:
 - Transfer**
 - The picture image is transferred to your PC and displayed.
 - Delete**
 - The picture image is deleted.
 - Save...**
 - The picture image is transferred to your PC and displayed.
 - Save window appears.

Note:

- If, while transferring the image to your PC, the displayed picture appears abnormal, restart the PC application and turn Camcorder POWER off, and then back on.

Driver Quick Reference



- 1 **File**
 - **Open...** To open an existing image (Bitmap or JPEG).
 - **Save As** To save the active image file under a new file name while preserving the original file.
 - **Data in from CAMERA** To display a dialog box listing all images in the CF Card memory along with Preview, Transfer, Delete, etc. commands.
 - **Delete Page** To delete the selected image from the CF Card memory.
 - **Delete All** To delete all images from the CF Card memory.
 - **Com Setting** To specify the port to which the Camcorder is connected.
 - **Print...** To print the currently active image.
 - **Exit** To quit the "Digital PhotoShot" application.
- 2 **Image**
 - **Image Adjustment** To modify the captured image as desired.
 - **Copy to Clipboard** To copy a view image to clipboard.
- 3 **Window**
 - **Close Image** Select "Close image" to close all view windows.
 - **Live Photo Zoom In** To open a view window.
- 4 **Help**
 - **Help** To display the Help screen.
 - **About** To display software version information.
- 5 **Option**
 - **Reload** To load the picture from the Camcorder to your PC again when Camcorder CF Card was changed.

PC Connection (continued)

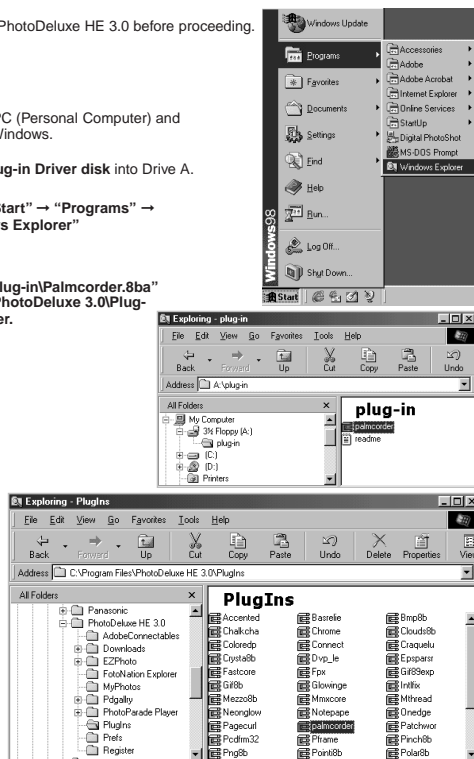
Plug-in Driver for Adobe® PhotoDeluxe™ HE 3.0 (PV-L859 only)

The Plug-in Driver allows interface between Camcorder and PhotoDeluxe HE 3.0 application.

Note:

Install Adobe PhotoDeluxe HE 3.0 before proceeding.

- 1 Turn on PC (Personal Computer) and start up Windows.
- 2 Insert Plug-in Driver disk into Drive A.
- 3 Select "Start" → "Programs" → "Windows Explorer"
- 4 Copy "IPlug-in\Palmcorder.8ba" file to "IPhotoDeluxe 3.0\Plug-ins" folder.



- 5 When installed, start up PhotoDeluxe HE 3.0 and follow instructions on how to transmit images.

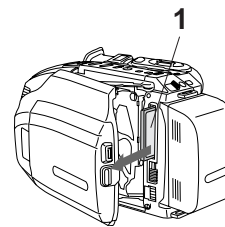
Using a PCMCIA Adaptor (optional)

If your PC has a PCMCIA type II slot, you can insert the CompactFlash Card into a PCMCIA adaptor (optional) to transfer images, captured with this Camcorder only, to your PC.

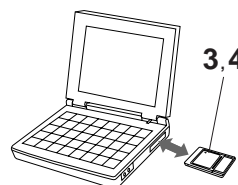
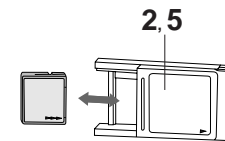
Inserting a CompactFlash Card

Before you begin...

- Turn your PC on.
- Set Camcorder POWER to OFF.



- 1 Remove the **CompactFlash Card** from the Camcorder.
- 2 Hold the **CompactFlash Card** so that the arrow side faces up and points toward the **PCMCIA Adaptor**. Securely insert the card into the PCMCIA Adaptor slot as far as it will go.
- 3 Hold the **PCMCIA Adaptor** so that the arrow side points toward the PCMCIA type II slot of your **PC (Personal Computer)**. Securely insert the PCMCIA Adaptor as far as it will go.
 - Depending on the PC, it may be necessary to turn the PCMCIA Adaptor upside down in order to insert the card.
- 4 To remove, push the eject button on your PC (may vary by machine) and pull the **PCMCIA Adaptor** out until it is no longer inserted in the **PC (Personal Computer)**.
- 5 Pull the **CompactFlash Card** out of the **PCMCIA Adaptor**.



Note:

- Do not remove the PCMCIA Adaptor from the PC while the PC is working or while image data is being transferred between the CompactFlash Card and the PC (including operation such as opening and storing images), this will cause irreversible damage to the memory.
- If you change file name or folder in the CF card, the images are displayed properly on PHOTO mode.

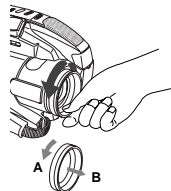
Operation Notes

Attaching Optional Filters and Lenses

When you remove the Lens Hood, pinch the Lens Hood and turn it counterclockwise as illustrated at right.

Then attach an optional filter or lens.

- Be careful not to touch the lens itself.
- Replace the Lens Hood after removing the accessory.



Lens Hood Area Operation Caution

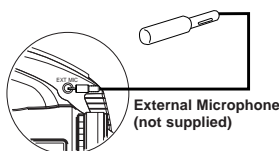
With a Wide or Telephoto conversion lens (optional) attached, the four corners of the screen may darken when zoom is set to maximum wide angle.

When attaching the lens hood, a Wide or Telephoto conversion lens (optional), etc. after a filter (optional) has been attached, the four corners of the screen may darken when zoom is set to maximum wide angle.

With two filters (optional) attached, the four corners of the screen may darken when zoom is set to maximum wide angle.

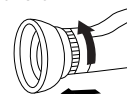
External MIC IN

Connect an external Microphone (optional) using an M3 connector if necessary. The built-in microphone is automatically disconnected when an external microphone is plugged in.



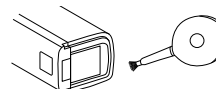
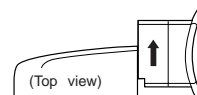
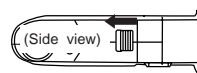
Cleaning EVF (Electronic Viewfinder)

PV-L759/PV-L779 To Remove



- 1 Turn the EVF Eyepiece counterclockwise 1/8 of a turn.
- 2 Pull free. Remove any lint or dust particles with a soft clean cloth being careful not to scratch the glass surfaces.
- 3 **To re-install EVF**
Line up the marks on the Eyepiece with the grooves inside the EVF shaft and attach. Turn the EVF clockwise 1/8 of a turn to lock in place.

PV-L859 To Remove



- 1 Slide and hold Eyepiece RELEASE button.
- 2 Slide the Eyepiece as shown. (DO NOT TWIST.)
- 3 Remove lint or dust with a lens blower (available where photography accessories are sold). DO NOT touch lens with fingers. Then, replace Eyepiece.

Panasonic[®]
MATSUSHITA ELECTRIC

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. IMPORTANT SAFETY NOTICE

- There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.
- An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.
- When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
- After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
- After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

- Unplug the AC cord and connect a jumper between the two prongs on the plug.
- Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M ohm and 5.2M ohm. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

LEAKAGE CURRENT HOT CHECK (See figure 1.)

- Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
- Connect a 1.5k ohm, 10 watts resistor, in parallel with a 0.15 micro farad capacitor, between each exposed metallic part on the set and a good earth ground, as shown in figure 1.
- Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
- Check each exposed metallic part, and measure the voltage at each point.
- Reverse the AC plug in the AC outlet and repeat each of the above measurements.
- The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

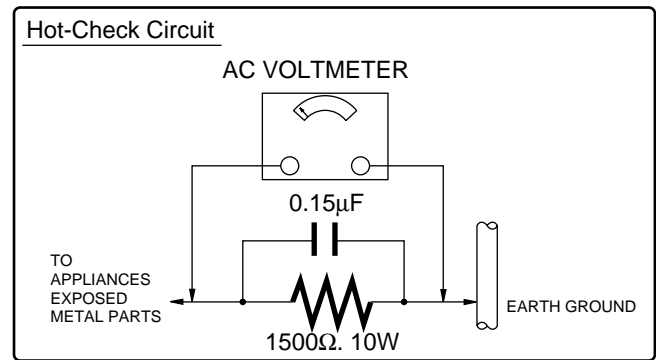


Figure. 1

PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

- Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
- After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
- Use only a grounded-tip soldering iron to solder or unsolder ES devices.
- Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
- Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
- Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
- Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION :

- Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
- Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

X-RADIATION (Model: A, B)

WARNING :

1. The potential source of X-Radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.

NOTE :

- It is important to use an accurate periodically calibrated high voltage meter.
3. Measure the High Voltage. The meter (electrostatic type) reading should indicate 2.2kV +/- 0.15kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

SERVICE NOTES

EXTENSION CABLES FOR SERVICE

Using the following Extension Cables, place the unit as shown for check and service.

No.	PART NUMBER	PART NAME	CONNECTION
1	VUVS0007	12Pin Extension Cable	FP8 on Main C.B.A. ~ CCD F.P.C. on Lens Unit
2	LSUA0020	20Pin Extension Cable	FP9 on Main C.B.A. ~ Lens F.P.C. on Lens Unit
3	LSUA0021	26Pin Extension Cable	FP1 on Main C.B.A. ~ A/C Head/Capstan F.P.C. on VCR Mechanism Chassis Ass'y
4	LSUA0021	26Pin Extension Cable	FP3 on Main C.B.A. ~ Top Operation F.P.C.

NOTE:

1. When using the cassette tape:

- (1) Be sure to remove a cassette lid cover of cassette tape.
- (2) Be sure to install the Lock Screw to Cassette Up Unit. **After servicing, be sure to remove the Lock Screw.**
Refer to "How to Hold the Cassette Up Unit in the Down Position without Cassette Cover Installed," page 1-14.
- (3) Select the H. Safety Defeat in SERVICE MODE. Refer to "Service Mode Specification," page 1-18.
Or, connect a silicon diode on component side of the Main C.B.A. as shown to defeat safety function.
(Since Takeup Reel sensor, located on Main C.B.A. does not work when opening Main C.B.A., the mechanism does not work (Reel lock). Therefore, make sure to defeat Safety function.)
2. Use extreme care so as not to apply any excessive pressure to the Cylinder/Head Amp F.P.C. After servicing, be sure to place it correctly. Refer to "Cylinder Ass'y" in "Disassembly/Assembly Procedures of Mechanism," page 2-20.
3. The LCD open/close SW. is for changing between LCD Display or EVF Display. When turning on LCD Display, place some paper or tape, etc. on LCD open/close SW. so that this SW. stays ON.
4. Use a grounded ESD wrist strap while disassembling the Lens portion.
5. Use extreme care when unplugging or plugging in connectors.

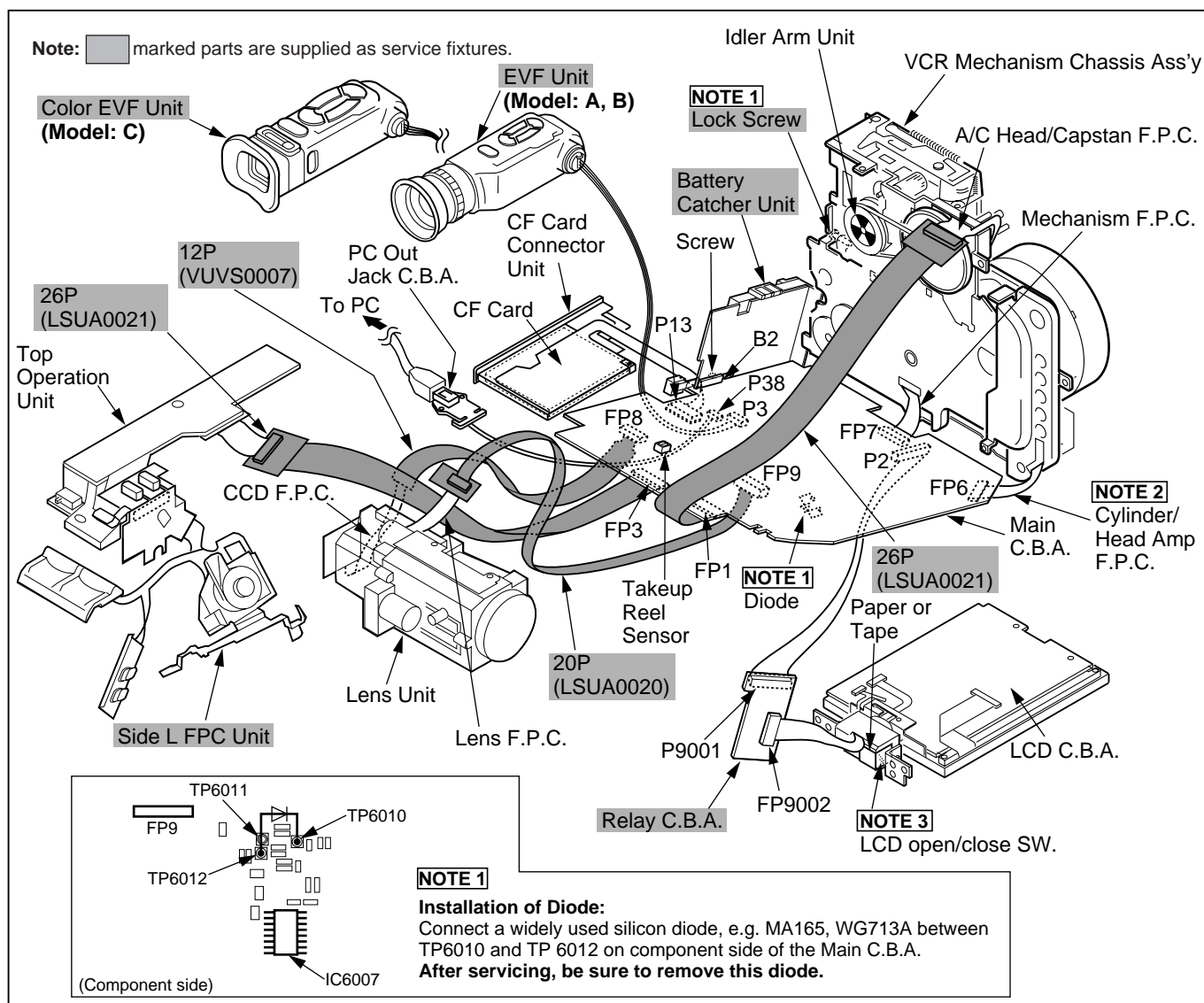


Fig. 1-1

INTERCONNECTION OF EXTENSION CABLES

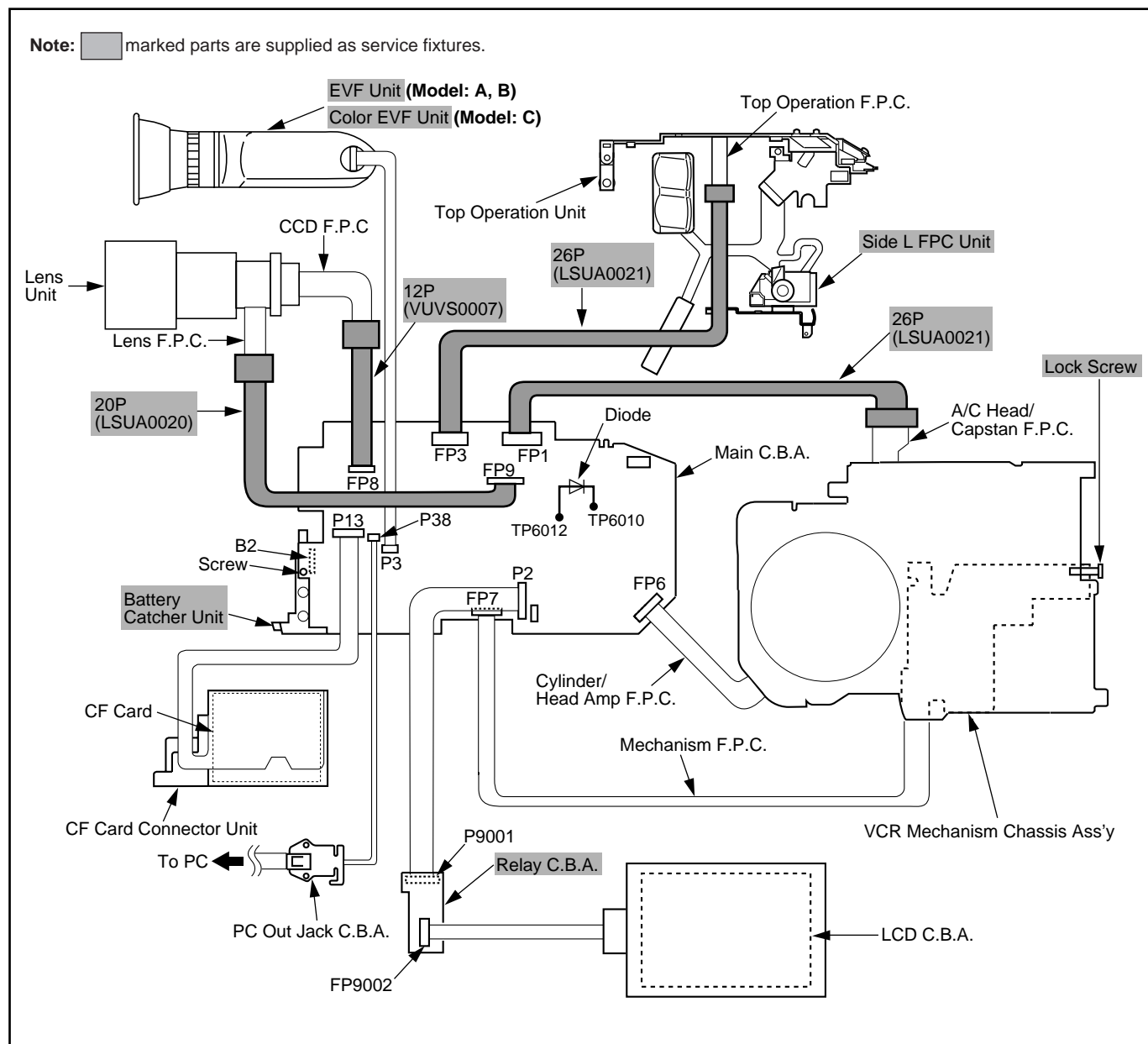


Fig. 1-2

HOW TO HOLD THE CASSETTE UP UNIT IN THE DOWN POSITION WITHOUT CASSETTE COVER INSTALLED

The Cassette Up Unit will be in the up position without the Cassette Cover installed.

To hold the Cassette Up Unit in the down position without it, a Lock Screw is needed.

Lock Screw (VHDW0125)



A Lock Screw is supplied as a service fixture.

How to install the Lock Screw:

- (1) (With Cabinet Parts) Before installing the Lock Screw, slide the CF Card Connector Unit as shown in Fig 2-1.
- (2) If the Lock Lever, shown in gray, is set to Position "A" (No hole), change Position "A" (No hole) to Position "B" (Hole) as shown in Fig. 2-2 by pushing Portion (a) as shown in Fig. 2-1.

Note: If the mechanism is in EJECT position, the Lock Lever cannot be changed to Position "B" by pushing Portion (a). In this case, apply the power to set the mechanism to STOP position.

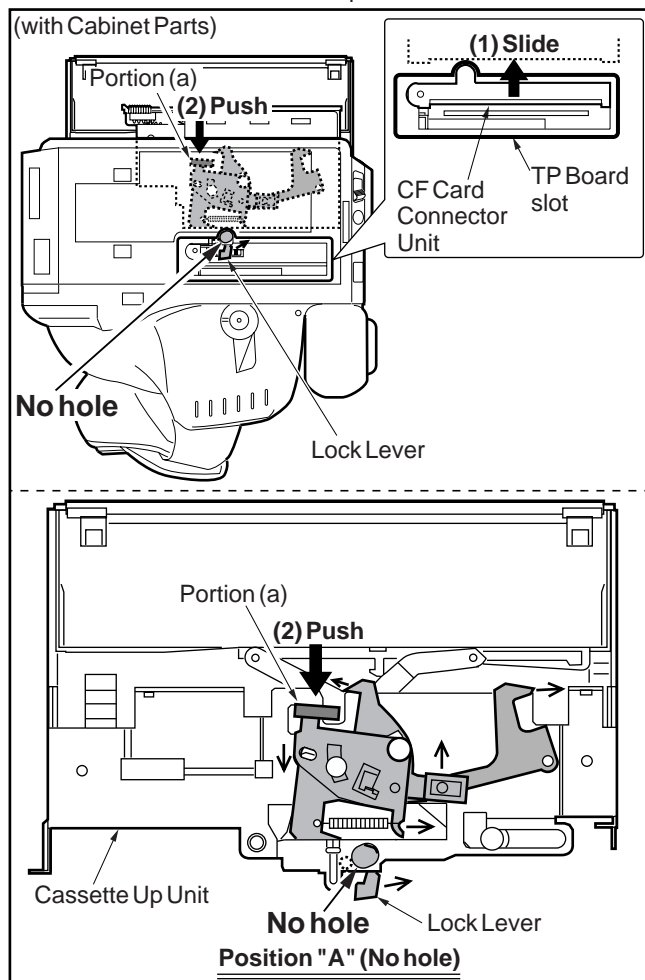


Fig. 2-1

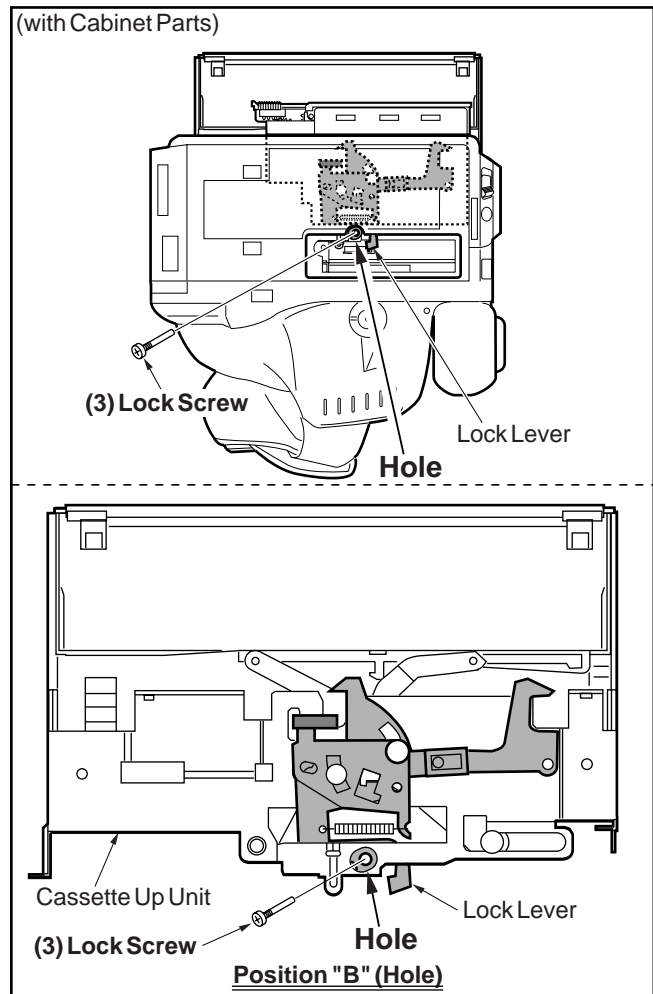


Fig. 2-2

- (3) Install the Lock Screw in the Hole (Threaded Hole for Lock Screw access) in Position "B".
- (4) Hold down the Cassette Up Unit.
- (5) Confirm that Cassette Up Unit will be held in the down Position.

Lock Screw is required when:

1. performing "Tape Interchangeability Adjustment."
2. performing **"EVR Adjustment" with cassette tape.**
3. servicing **with cassette tape** in Service Position. The procedure below is required when the unit is in safety defeat mode.
 - (1) Confirm that the Lock Lever, shown in gray, is set to Position "A" as shown in Fig. 2-1, and that the mechanism is in the STOP position.
 - (2) Insert the cassette tape.
 - (3) Push Portion (a) as shown in Fig. 2-1 while keeping the Cassette Up Unit in the down position so the mechanism starts loading. (Cassette Down Switch is ON.)

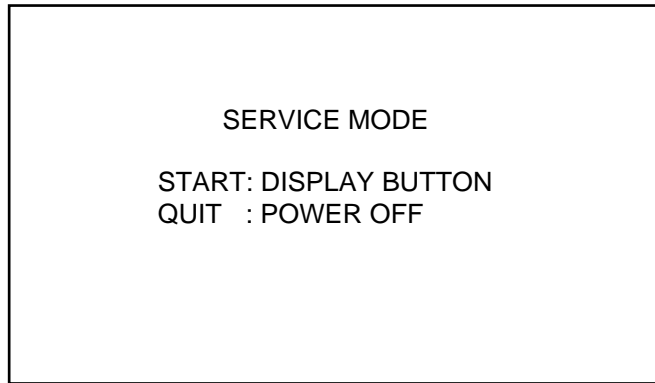
CAUTION:
After servicing, be sure to remove the Lock Screw.

SERVICE MODE SPECIFICATION (SELF-DIAGNOSTIC SYSTEM)

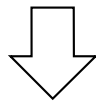
- Operation :
- Start-up : Press and hold all of the **Display**, **REC**, and **Stop** buttons over 2 seconds, the unit goes into the self-diagnostic mode and main menu appears.
 - Mode Selection : Press display button to change and select self-diagnose mode.
 - Close : Turn off the Power Switch.

Display : Following descriptions can be displayed on EVF and TV monitor at the same time.

1. Main Menu

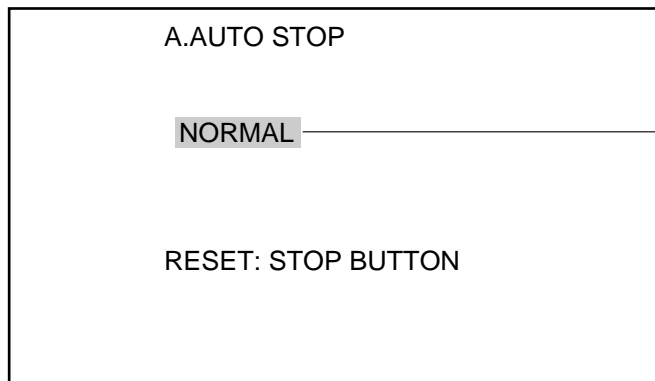


Press and hold all of the Display, REC and Stop buttons over 2 seconds. The Main Menu appears on E.V.F. and TV monitor.



DISPLAY BUTTON

2. Auto Stop



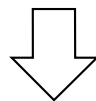
When the unit suddenly shuts off, It is possible to see the cause description in this menu. Even if the AC adaptor or battery is disconnected, the most recent failure will be memorized. Pressing the Stop button at this time will reset the memory.

LOADING LOCK **
CYLINDER LOCK
TAKEUP REEL LOCK
SUPPLY REEL LOCK
DEW
BATTERY UNDER CUT
STANDBY MODE

* Cause descriptions can be displayed until power shuts off.

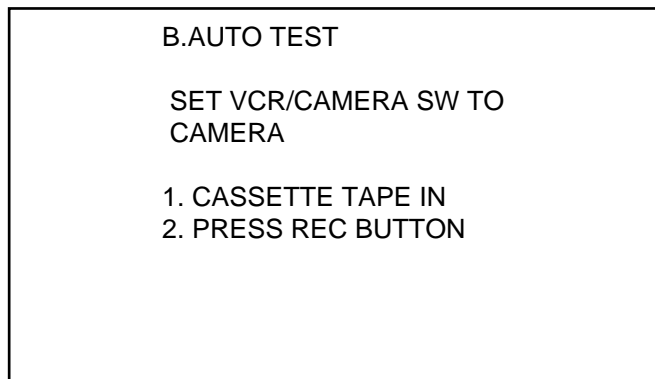
** LOADING LOCK --- EJECT
STOP
STBY
REC / PB

(When it is possible to detect the lock position, loading lock position can be displayed.)

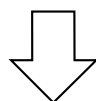


DISPLAY BUTTON

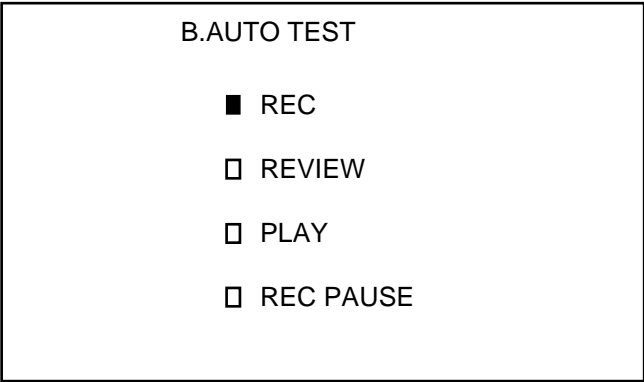
3. Auto Test



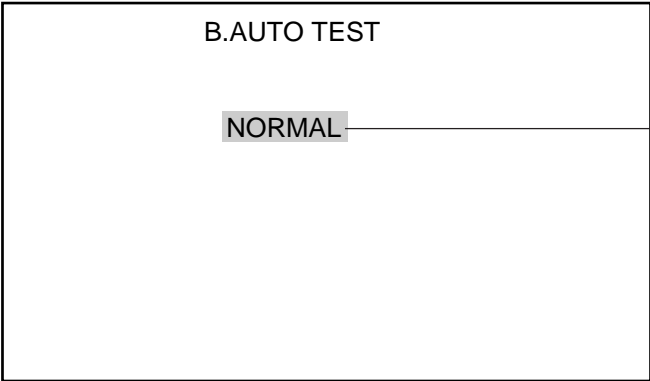
- Cassette tape in and Press REC button.
- The unit operates automatically on tests.



REC BUTTON



- a. Automatically operates REC (30sec), REW, PLAY, and STOP.
- b. Displays the test status while auto test is progressing.
(■ Mark shows the test status.)



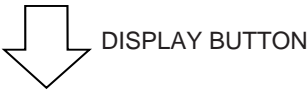
Displays the test result.

- * LOADING LOCK **
- CYLINDER LOCK
- TAKEUP REEL LOCK
- SUPPLY REEL LOCK
- DEW
- BATTERY UNDER CUT
- STANDBY MODE

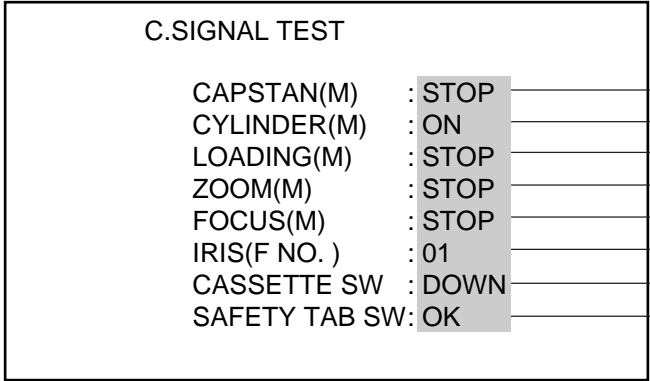
* Cause descriptions can be displayed until power shuts off.

- ** LOADING LOCK --- EJECT
- STOP
- STBY
- REC / PB

(When it is possible to detect the lock position, loading lock position can be displayed.)



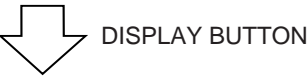
4. Motor Control Signal Check



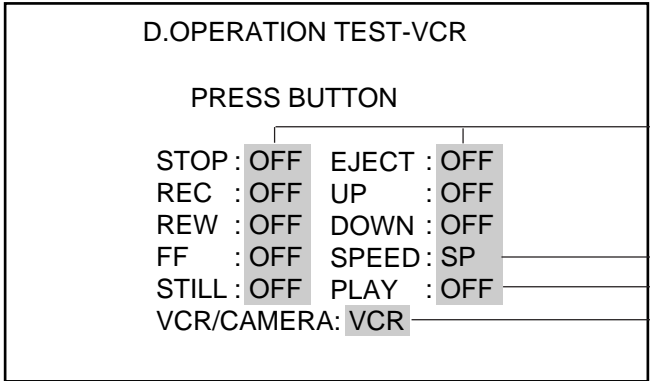
Displays all of motor drive signals and switch inputs from mechanism chassis.

- FWD, REV
- OFF
- FWD, REV
- WIDE, TELE
- FAR, NEAR
- NO.*
- UP
- BRK

* Iris No. display

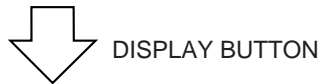


5. Operation Button Test - VCR

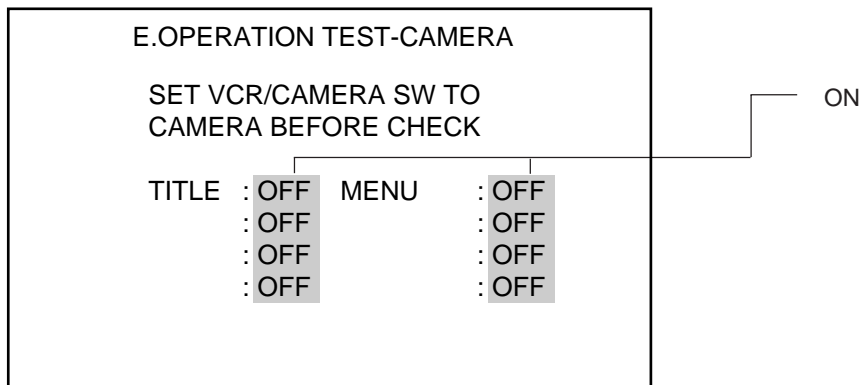
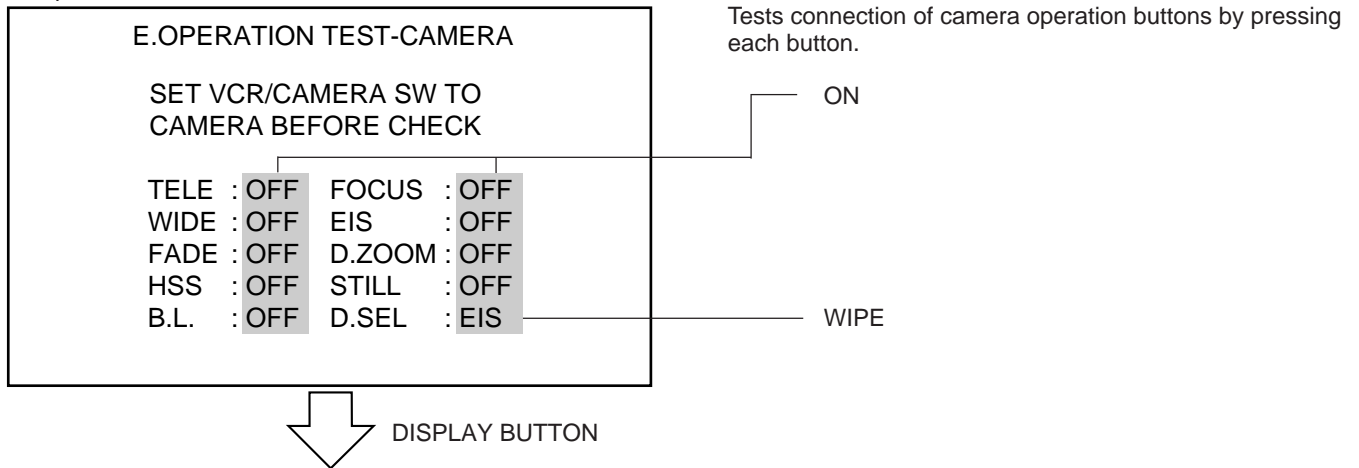


Tests connection of VCR operation buttons by pressing each button.

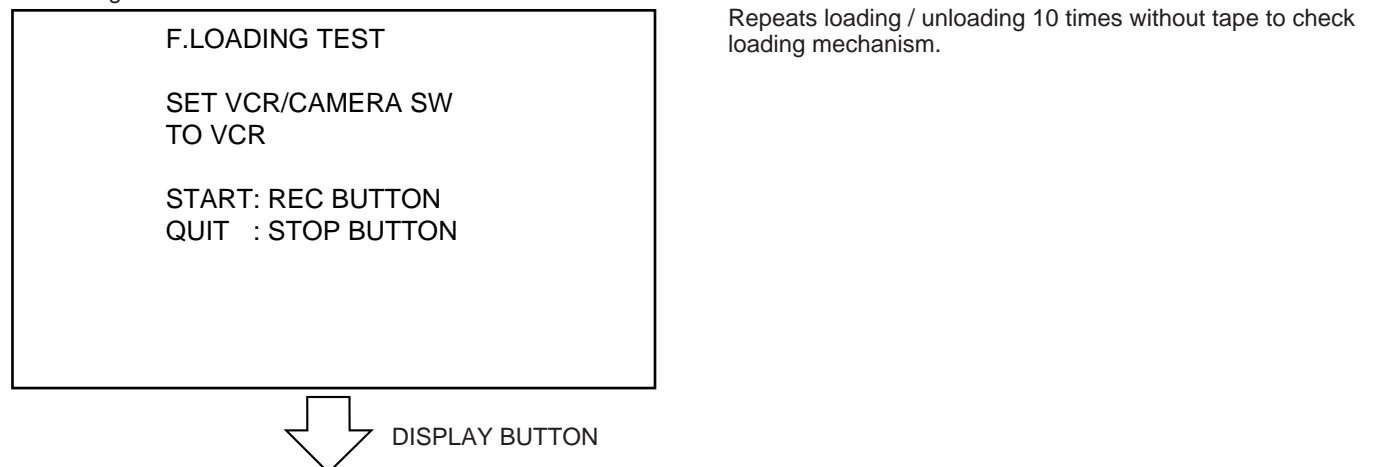
- ON
- SLP
- ON
- CAMERA



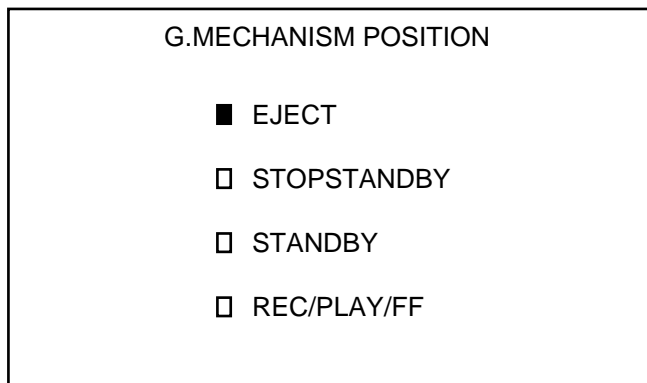
6. Operation Button Test - Camera



7. Loading Test



8. Mechanism Position

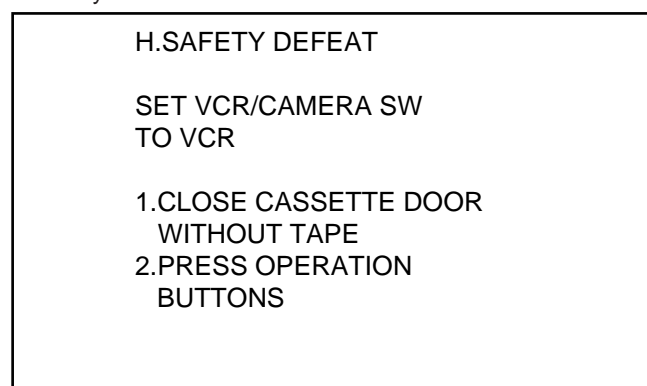


Displays mechanism position by monitoring mode switch.
(■ mark shows the current mechanism position.)



DISPLAY BUTTON

9. Safety Defeat



- a. Defeats following safety functions. Cylinder lock, Reel lock, End of tape, Battery under cut, Safety tab switch.
- b. It is possible to check mechanism movement without tape by pressing operation buttons in this mode.

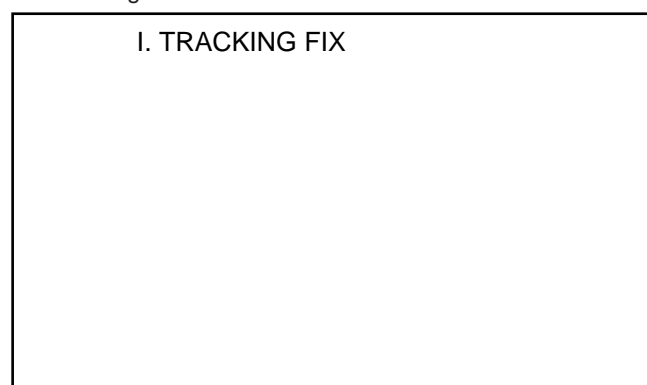
Another Method to put the unit into Safety Defeat mode:

Connect a silicon diode between TP6010 and TP6012 on component side of the Main C.B.A.
Refer to "Extension Cables for Service" in "Service Notes," page 1-12.



DISPLAY BUTTON

10. Tracking Fix

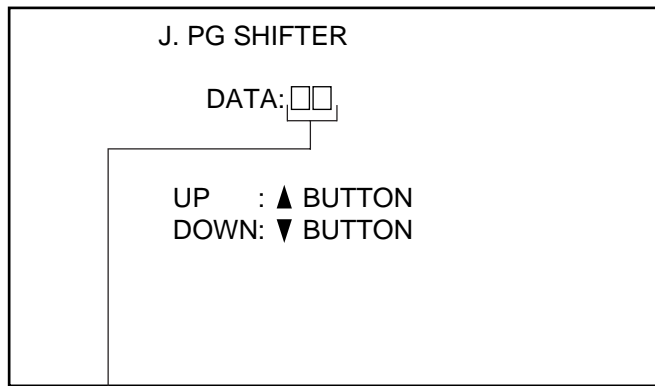


Functions to fix tracking position to its center for tape path alignment.



DISPLAY BUTTON

11. PG Shifter



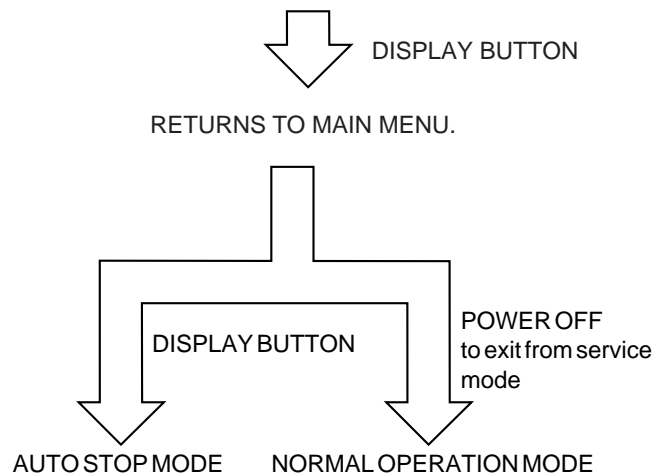
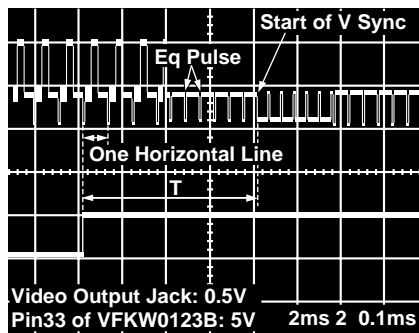
This is a function to adjust Head Switching Position (PG SHIFTER) by pressing UP ▲ or Down ▼ button without using the Personal Computer.

To adjust with this function, the TP Board Kit, Audio/Video cable, oscilloscope, and VHS-C Alignment Tape (VFMS0004H6C) are necessary.

For connecting TP Board Kit, refer to "Preparation" in "Electrical Adjustment Procedures," page 2-44.

Adjustment procedure

Press UP ▲ or Down ▼ button while playing back the VHS-C Alignment Tape so that T is 6.5H +/- 0.5H (approx. 0.4msec)



DESCRIPTION OF EMERGENCY INDICATIONS

When something unusual as shown below occurs in the deck, LED begins flashing for approx. 15 seconds to indicate an Emergency.

No.	Information	POWER LED	TALLY LED/ REC LED	Cause and Characteristic
①	Cylinder Lock	_____	●	CYLINDER Motor stops in the REC, PB, CUE, REVIEW or STILL MODE for 2 second.
②	Takeup-Reel Lock	●	_____	There is no TAKEUP REEL sensor pulse for 2.3 seconds (PLAY, REC) or 0.7 second (CUE, REVIEW, FF, REW).
③	Battery Under Cut or DEW	⊗	_____	When the Battery voltage drops to 5.3V. Or excessive moisture condenses in the Unit.

NOTE :

- : Indicates LED Flashing at 3Hz rate (duty 50%)
- ⊗ : Indicates LED Flashing at 0.8Hz rate (duty 50%)
- : Indicates LED Flashing at 1Hz rate (duty 50%)

METHOD FOR LOADING/ UNLOADING OF MECHANISM

(Electrical Method)

CAUTION:

If loading does not start after DC Power Supply is applied, DO NOT continue to applying DC Power Supply.

Connect the TP Board Kit as shown, and apply 3VDC Power Supply (DC+ to TP21, DC- to TP20 for loading or DC+ to TP20, DC- to TP21 for unloading). Refer to "How to Use TP Board Kit," page 1-24.

It normally takes approx. 6 seconds to unload the Mechanism from fully-loaded position to EJECT position.

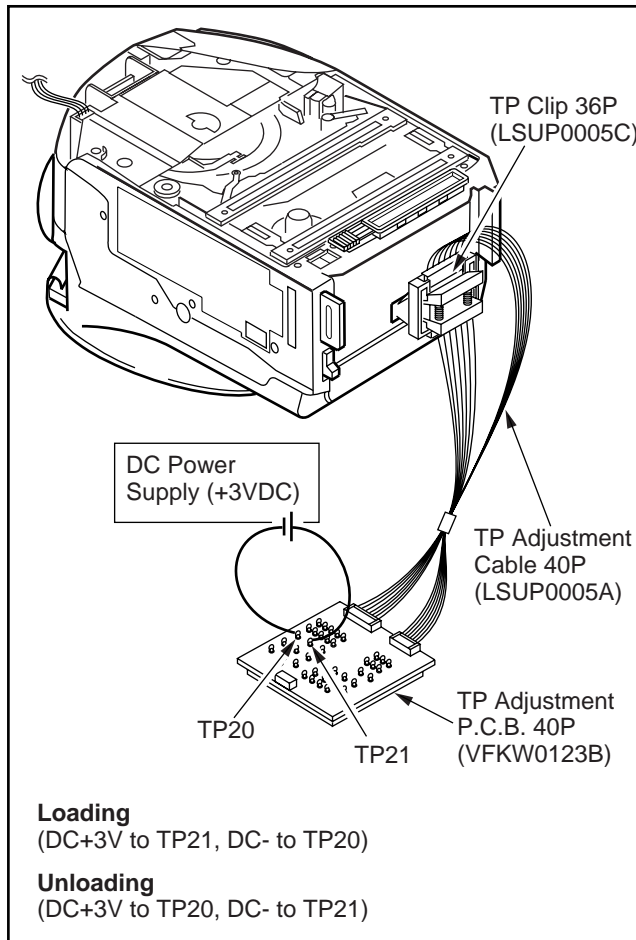


Fig. 3-1

(Manual Method-1) without Cabinet Parts

Turn the Gear of Reduction Gear Unit clockwise (for loading) or counterclockwise (for unloading) manually.

It is necessary to rotate approx. 80 times from fully-loaded position to EJECT position.

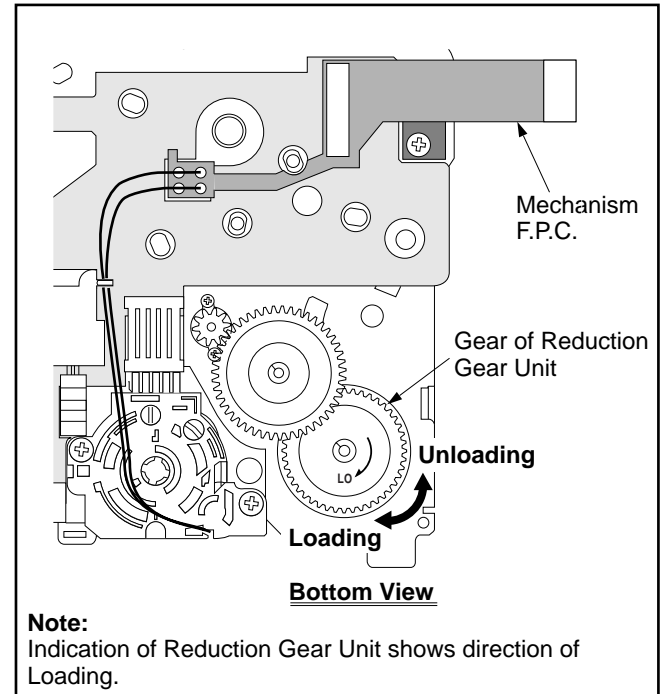


Fig. 3-2

(Manual Method-2) with Cabinet Parts

Turn the Gear of Reduction Gear Unit clockwise (for loading) or counterclockwise (for unloading).

It is necessary to rotate approx. 80 times from fully-loaded position to EJECT position.

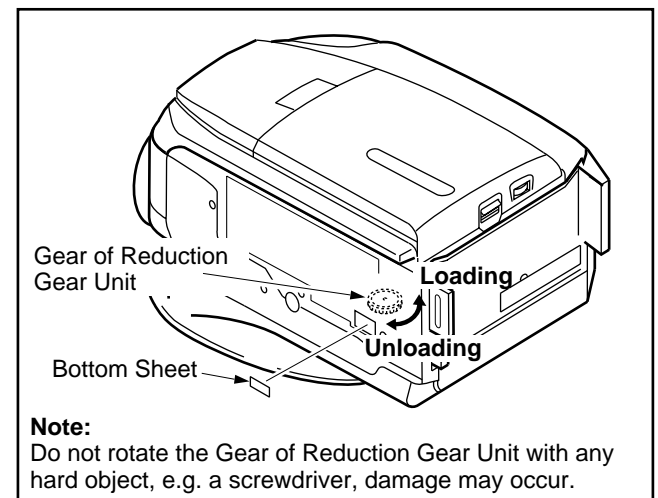


Fig. 3-3

HOW TO REMOVE A JAMMED TAPE

(Electrical Method)

CAUTION:

If loading does not start after DC Power Supply is applied, DO NOT continue applying DC Power Supply.

- (1) Remove a Screw and remove the EVR Cover.

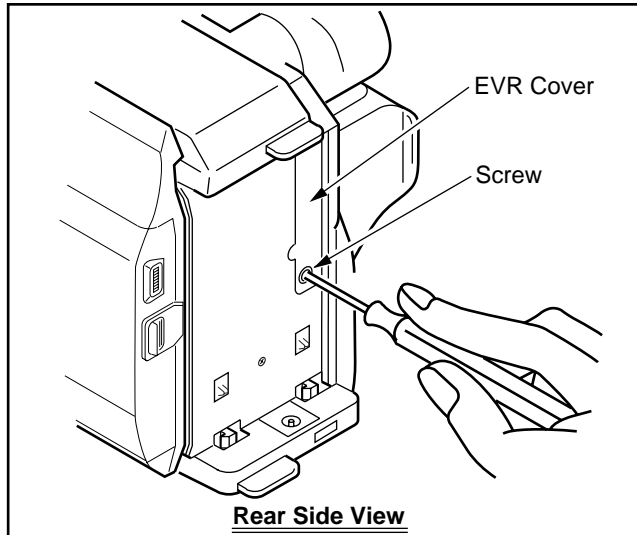


Fig. 4-1

- (2) Place the unit with the Cassette Cover facing upward.
- (3) Slide the Lock Lever through TP Board slot to open the Cassette Cover slightly. Then, slide the CF Card Connector Unit so that the TP Board Kit can connect to Main C.B.A. (S301) as shown. (Hold the Cassette Cover slightly downward.)

Note:

Do not fully open the Cassette Cover. Otherwise, the cassette tape may be damaged.

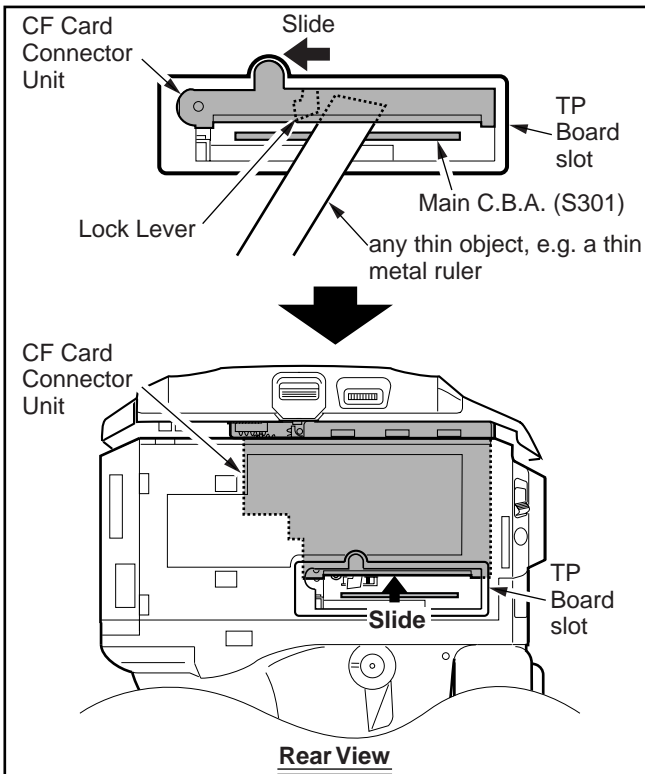


Fig. 4-2

- (4) Connect the TP Board Kit through the TP Board slot.
- (5) Apply +3VDC Power Supply to TP20 (+) and TP21 (-) on the TP Board to unload the mechanism. It normally takes approx. 6 seconds to unload the Mechanism to EJECT position. Then, remove the Power Supply and remove the TP Board Kit.

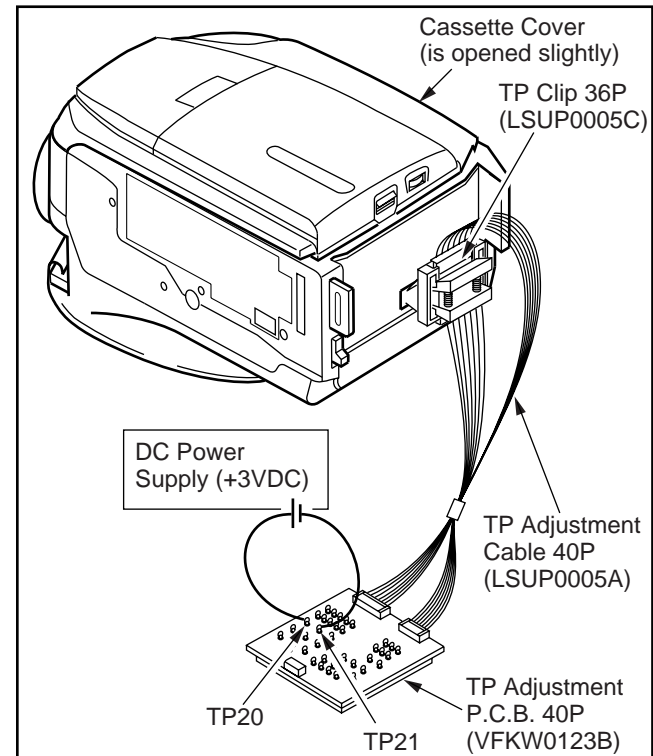


Fig. 4-3

- (6) Open the Cassette Cover fully.
- (7) Remove the tape slack by rotating the Takeup Reel Gear of the cassette tape as shown in Fig. 4-4.

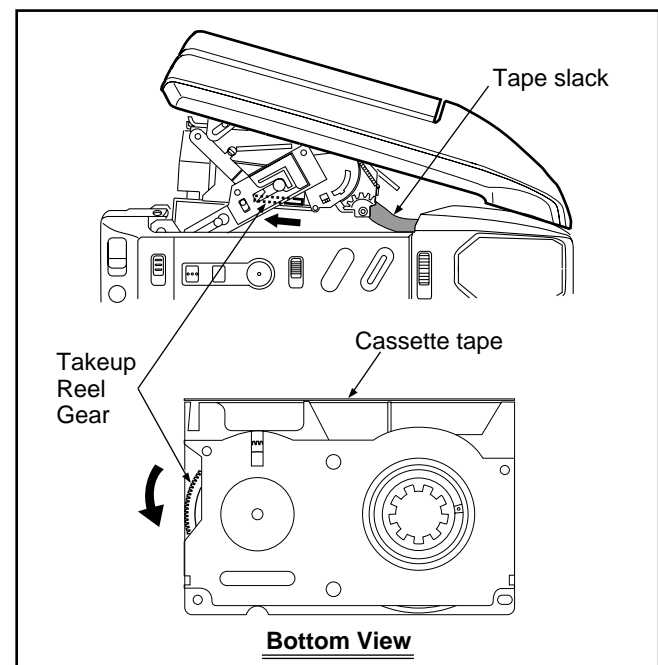


Fig. 4-4

- (8) Take out the cassette tape.
- (9) Connect the Power or Battery to set the Mechanism to STOP Position.

(Manual Method)

- (1) Place the unit with the Cassette Cover facing upward as shown in Fig. 4-5.
- (2) Rotate the Gear of Reduction Gear Unit.
When the Mechanism reaches at EJECT position, the Cassette Cover will open slightly, stop rotating. (It is necessary to rotate approx. 80 times from fully-loaded position to EJECT position.)
Refer to **Manual Method-2** in "Method for Loading/Unloading of Mechanism," page 1-21.

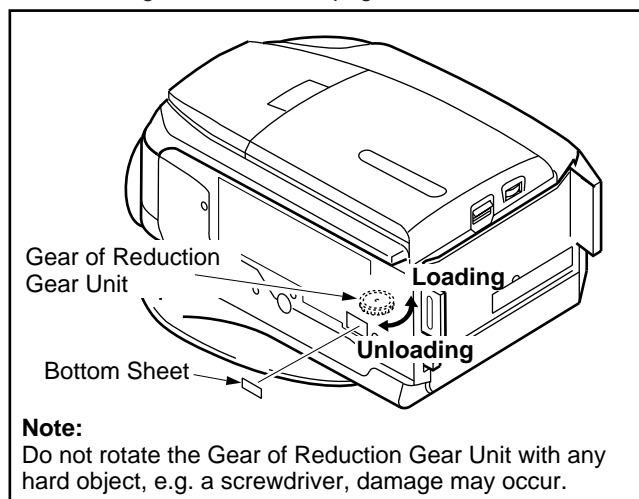


Fig. 4-5

- (3) Open the Cassette Cover.
- (4) Remove the tape slack by rotating the Takeup Reel Gear of the cassette tape as shown in Fig. 4-4.
- (5) Take out the cassette tape.
- (6) Connect the Power or Battery to set the Mechanism to STOP Position.

HOW TO ACCESS THE MANUAL TRACKING CONTROL

Press the UP ▲ (Tracking Up) or Down ▼ (Tracking Down) button to perform the Manual Tracking Adjustment in Playback Mode.

CONNECTION OF THE FLEXIBLE CABLES TO TRAP CONNECTORS

Plug No.	No. of Pins	C.B.A.
FP1	26 Pin	Main C.B.A.
FP3	26 Pin	Main C.B.A.
FP4	6 Pin	Main C.B.A.
FP6	39 Pin	Main C.B.A.
FP7	16 Pin	Main C.B.A.
FP8	12 Pin	Main C.B.A.
FP9	20 Pin	Main C.B.A.
FP11	13 Pin	Main C.B.A.
FP901	6 Pin	EVF C.B.A. (Model: A, B)
FP901	20 Pin	Color EVF A C.B.A. (Model: C)
FP1201	21 Pin	LCD C.B.A.
FP1202	5 Pin	LCD C.B.A.
FP3501	12 Pin	Head Amp C.B.A.
FP9001	24 Pin	LCD C.B.A.
FP9002	18 Pin	Relay C.B.A.

HOW TO USE TP BOARD KIT

TP Board Kit is required when:

1. performing "Tape Interchangeability Adjustment."
2. performing "EVR Adjustment."
3. the cassette tape is jammed. Refer to "How to remove a jammed tape (Electrical Method)," page 1-22.
4. loading or unloading the Mechanism (Electrical Method).

How to connect the TP Board Kit:

- (1) Remove a Screw and remove the EVR Cover. Then, open the Cassette Cover by sliding the EJECT button with Power ON, or sliding the Lock Lever through TP Board slot. Remove the Cassette Cover for "Tape Interchangeability adjustment," OR release only 2 Locking Tabs (L-1) of the Cassette Cover for "EVR Adjustment." Refer to "Disassembly/Assembly Procedures of Cabinet," page 2-2.
- (2) Slide the CF Card Connector Unit as shown.

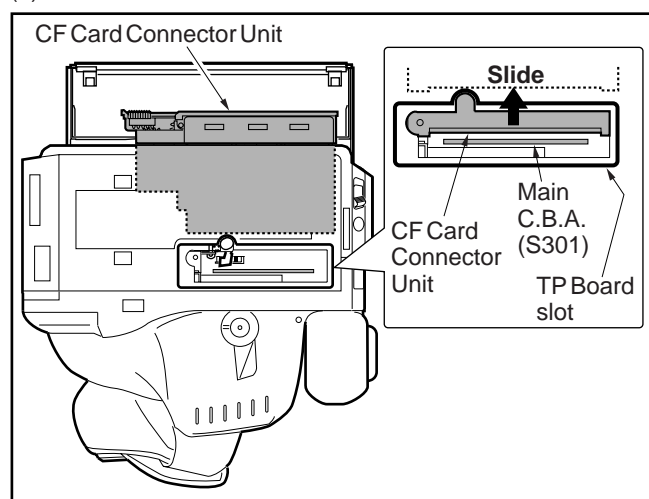


Fig. 5-1

- (3) Install the Lock Screw to the Cassette Up Unit to use the cassette tape.
Refer to "How to Hold the Cassette Up Unit in the down position without Cassette Cover installed," page 1-14.
- (4) Connect the TP Board Kit to S301 as shown.

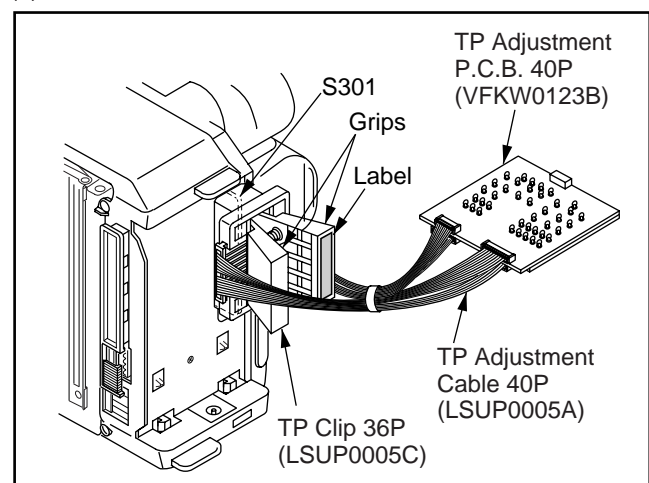


Fig. 5-2

Note:

When inserting the TP Clip to S301 on the camcorder, pinch the grips and be sure that the label is set to the right side as shown in Fig. 5-2.

Signal description on TP Adjustment P.C.B. 40P (VFKW0123B)

Pin No.	Signal
1	GND
2	IRIS
3	GND
4	(Not used)
5	IRIS OPEN/CLOSE SW
6	EVR MODE
7	CAM +4.5V
8	EVR SERIAL DATA 1
9	V-SYNC
10	EVR SERIAL DATA 0
11	CAMERA RESET (L)
12	NC
13	EVR SERIAL CLOCK
14	NC
15	A/D SIGNAL
16	NC
17	NC
18	LUMINANCE
19	NC
20	LOADING MOTOR 0
21	LOADING MOTOR 1
22	SUPPLY REEL PULSE
23	RESET (L)
24	SAFETY TAB BROKEN (L)
25	PB CTL PULSE
26	SUPPLY PHOTO TR (L)
27	CAP FG
28	CNR
29	H-SYNC
30	PB LUMINANCE
31	YNR
32	ENVELOPE
33	HEAD SW
34	(Not used)
35	GND
36	GND
37	REC CHROMINANCE
38	REC LUMINANCE
39	(Not used)
40	(Not used)

ELIMINATION OF TAPE SLACK

Before inserting the Cassette Tape in the Compact VHS Movie, take up slack in the tape by turning the Takeup Reel Gear on the side of the Cassette Tape. Turn it in the direction of the arrow until no slack is evident and opposite reel begins to turn.

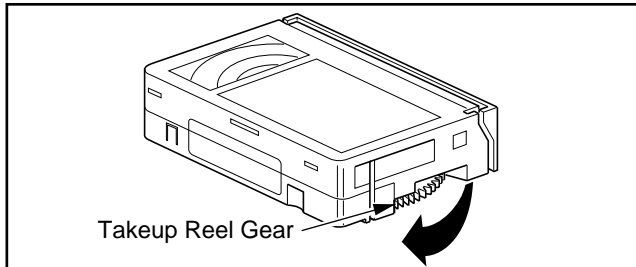


Fig. 6

INSERTION (OR REMOVAL) OF CASSETTE TAPE

As in Fig. 7, hold the cassette tape vertically to insert or remove the cassette tape.
(Be sure to eliminate slack before inserting the cassette tape.)

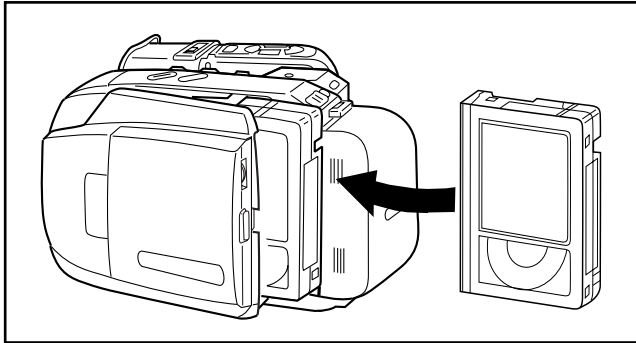


Fig. 7

SERVICE OF CAPSTAN UNIT

Since the CAPSTAN UNIT has already been adjusted at the factory, do not try to adjust the FG Head. The CAPSTAN UNIT is supplied as a complete assembly as a replacement part.

Replacement procedure for Leadless (Chip) Component

The following procedures are recommended for the replacement of the leadless components used in this Unit.

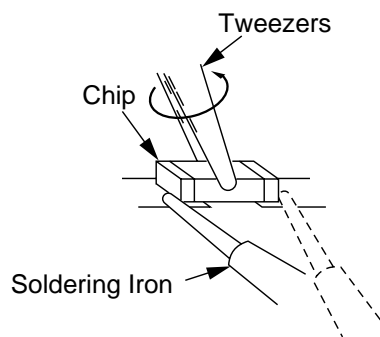
1. Preparation for replacement
 - a. Soldering Iron
Use a pencil-type soldering iron using less than 30 watts.
 - b. Solder
Eutectic Solder (Tin 63%, Lead 37%) is recommended.
 - c. Soldering time
Do not apply heat for more than 4 seconds.
 - d. Preheating
Leadless capacitor must be preheated before installation.
(130°C ~ 150°C, for about two minutes.)

Note :

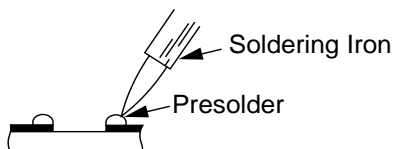
- a. Leadless component must not be reused after removal.
 - b. Excessive mechanical stress and rubbing of the component electrode must be avoided.
2. Removing the leadless component
Grasp the leadless component body with tweezers and alternately apply heat to both electrodes. When the solder on both electrodes is melted, remove leadless component with a twisting motion.

Note :

- a. Do not attempt to lift the component off the board until the component is completely disconnected from the board by a twisting action. The leadless component is attached to the PCB with glue. So carefully twist the component when removing it so as not to break or damage any foil under the component.
- b. Take care not to break the copper foil on the printed board.

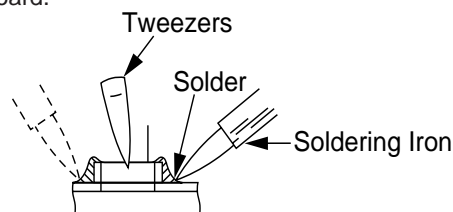


3. Installation of the leadless component
 - a. Presolder the contact points of the circuit board.
 - b. Press the part downward with tweezers and solder both electrodes as shown below.



Note :

Do not glue the replacement leadless component to the circuit board.



SPECIAL NOTE

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

MODEL NO. IDENTIFICATION MARK

Use Marks shown in the chart below to distinguish the different models included in this Service Manual.

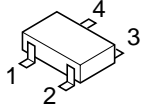
MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
NOT USED	Z

Note:

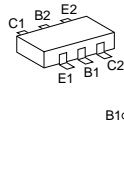
Refer to Item 3 of Schematic Diagram Notes of Schematic Diagram and Circuit Board Layout Notes, for Mark "Z."

IC, TRANSISTOR AND CHIP PART INFORMATION

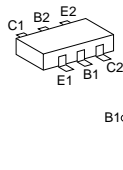
MAIN C.B.A.



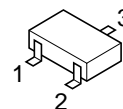
S80839ANNPT2



XN4501, IMX1T108

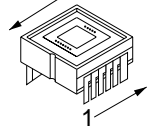


XN4601



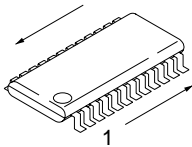
XC62FP4502PR

CCD C.B.A.

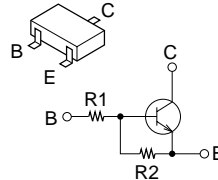


MN37243FT-M

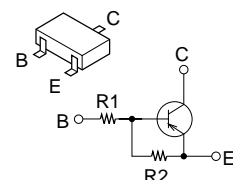
GENERAL C.B.A. / ASS'Y PARTS



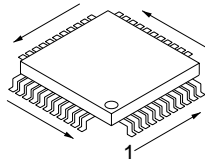
AN1358S-E1, AN2515NS, BA10324AFVE1, LB1837M-TE-L, MN3112SA-E1, MN38663S, S3510AEFJTB, UN224-TX, S29355AFETF, TC4W53FTE12L, MC14050BDETL, AN3368SB, BR9040F-E1, LB1837MLTEL3, LB1837MTEL3, BA6288FS-E2, UPC358GR-E1, UPC358G2-E1, UPC358G2E1MS, AN3365SB, ADM202JRN, TC7W240FU, TC7S04FTE85R, UN224-TX



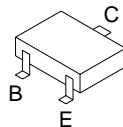
UN5212(R1=22K, R2=22K), UN5213(R1=47K, R2=47K), UN5217(R1=22K, R2=OPEN), DTC124EU(R1=22K, R2=22K), DTC144EU(R1=47K, R2=47K), DTC124TU(R1=22K, R2=OPEN), MUN5212T1(R1=22K, R2=22K)



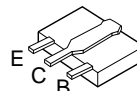
UN5111(R1=10K, R2=10K), UN5112(R1=22K, R2=22K), UN5113(R1=47K, R2=47K), UN5115(R1=10K, R2=OPEN), DTA124EU(R1=22K, R2=22K), DTA144EU(R1=, R2=), DTA114EU(R1=10K, R2=10K)



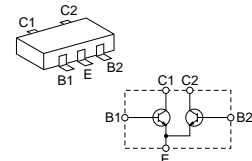
AN2109FHQ, AN2401NFH, AN3897FH, BA7757BK, BA9710KV, BA9708K, MN5263, MN67324, AN2537FHQ, MN101D02FWB3, AN2522NFHP, HD7065M02F



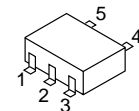
2SB1585, 2SB1218A, 2SB970, 2SC3931, 2SD601A, 2SD1819A, 2SD602, 2SK1958, MSD601, 2SD601AI, MSD602, 2SC2412K1, 2SA1037K146R, 2SA1576T106R, 2SB709A, 2SC4081T106R, 2SD602A, MSB1218A, MSD1819A, 2SD1819AI, 2SB1218AI, 2SB1424T100Q, 2SB1424T100P, 2SB709, 2SB709AI



2SB1073, 2SD1119, 2SD968A, RH5RE45AA-T1



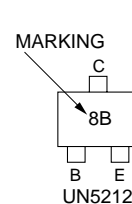
XN1501, FMW1T148



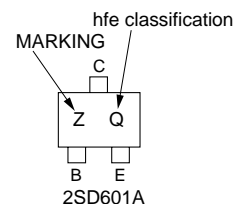
TA75S558F85L, TC7S04FTE85R

HOW TO READ THE IDENTIFICATION MARK OF CHIP COMPONENTS.

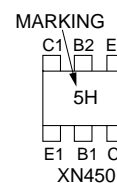
MARKING	PART NO.	MARKING	PART NO.	MARKING	PART NO.
A	2SB709	6E	UN5115	5C	XN4601
B	2SB1218A	8B	UN5212	8C	MUN5213
B	2SB709A	1R	2SB1585	A61	MA720
B	2SC4081T106R	8C	UN5213		
C	DTA144EU	8H	UN5217		
F	2SA1037K146R	5H	XN4501		
T	2SD1119	8C	DTC144EU		
I	2SB1073	6B	UN5112		
K	2SA1615	MC	MA143		
U	2SC3931	2A	MA728		
Z	2SD601A	1B	MA111		
Z	2SD1819A	8HR	DTC124TU		
AEPJ	2SB1424T100Q	1A	MA110		
ZY	2SB1628	MN	MA141WA		
1R	2SB970	MT	MA141WK		
V	2SD968A	12H	MA3120WA		
W	2SD602	PB	MA736		
G	2SK1958	MO	MA142WA		
6A	UN5111	MU	MA142WK		
6C	UN5113	5R	XN1501		



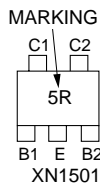
UN5212



2SD601A



XN4501



XN1501

DISASSEMBLY/ASSEMBLY PROCEDURES

DISASSEMBLY/ASSEMBLY PROCEDURES OF CABINET

DISASSEMBLY FLOW CHART

This flow chart indicates the disassembly steps of the cabinet parts and the P.C. Boards in order to gain access to item (s) to be serviced. When reassembling, perform the step (s) in the reverse order. Bend, route and dress the wires as they were originally.

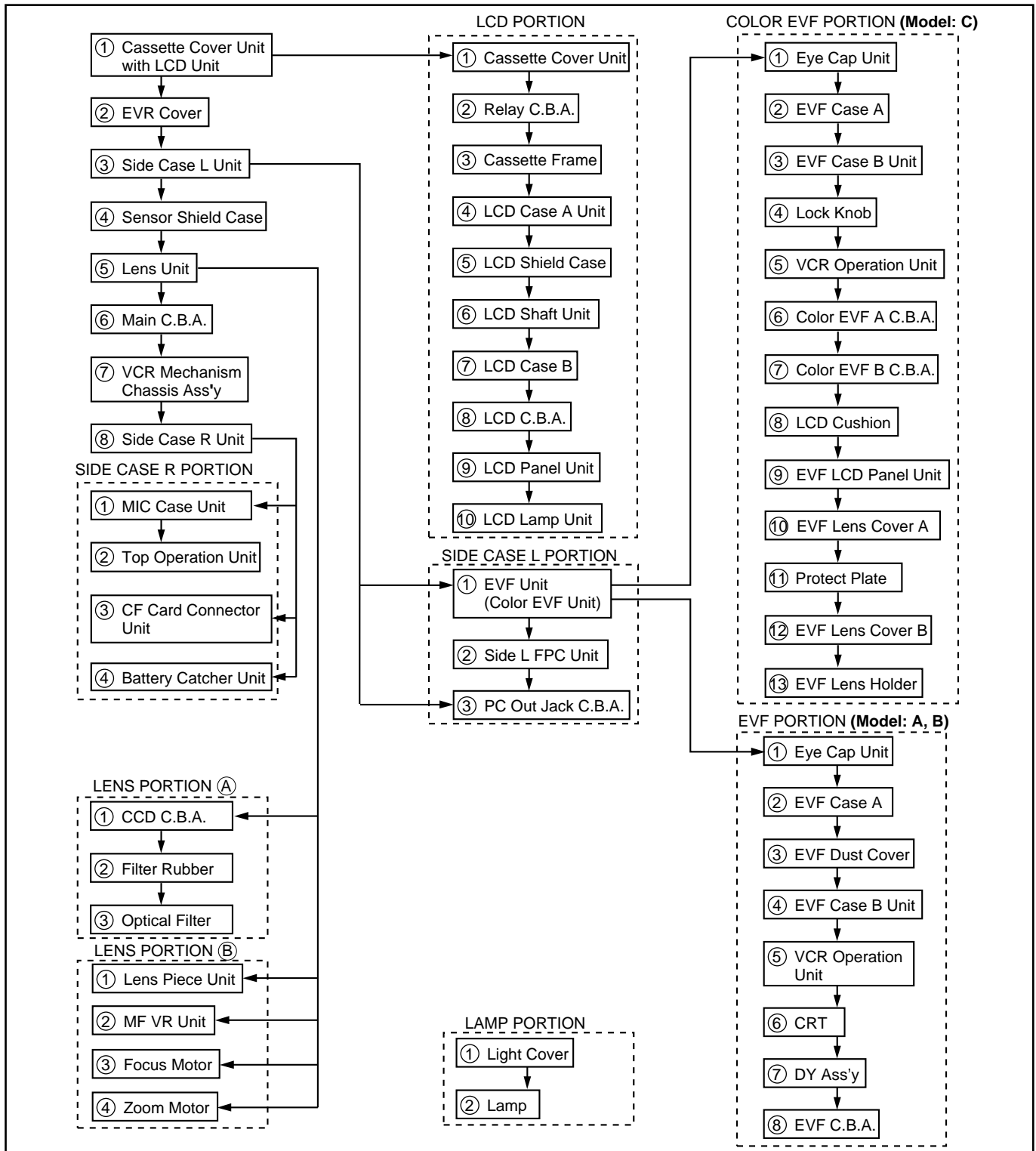


Fig. D1

Note :

- When removing the cabinet, work with care so as not to break the Locking Tabs.
- Place a cloth or some other soft material under the P.C. Boards or Unit to prevent damage.
- When reinstalling, ensure that the connectors are connected and electrical components have not been damaged.
- Do not supply power to the unit during disassembly and reassembly.

DISASSEMBLY METHOD

STEP /LOC. No.	PART	Fig. No.	REMOVE
①	Cassette Cover Unit with LCD Unit	D2	2(L-1), (L-2), P9001
②	EVR Cover	D3	(S-1)
③	Side Case L Unit	D3	(S-2), (S-3), 3(S-4), (S-5), 2(S-6), Top Operation receptacle, P3, P38
④	Sensor Shield Case	D4	(S-7)
⑤	Lens Unit	D4	2(S-8), (L-3), FP4, FP8, FP9
⑥	Main C.B.A.	D5	2(S-9), (S-10), FP1, FP3, FP6, FP7, FP11, B2, P2, P13
⑦	VCR Mechanism Chassis Ass'y	D6	2(S-11), 2(S-12), lug of Top Operation Unit
⑧	Side Case R Unit	D6	-----

↑
A

↑
B

↑
C

↑
D

How to read chart shown above:

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

These numbers are also used as the identification (location) No. of parts in Figures.

B: Part to be removed or installed.

C: Fig. No. showing Procedure or Part Location.

D: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

3(S-1) = 3 Screws (S-1), 2(L-1) = 2 Looking Tabs (L-1)

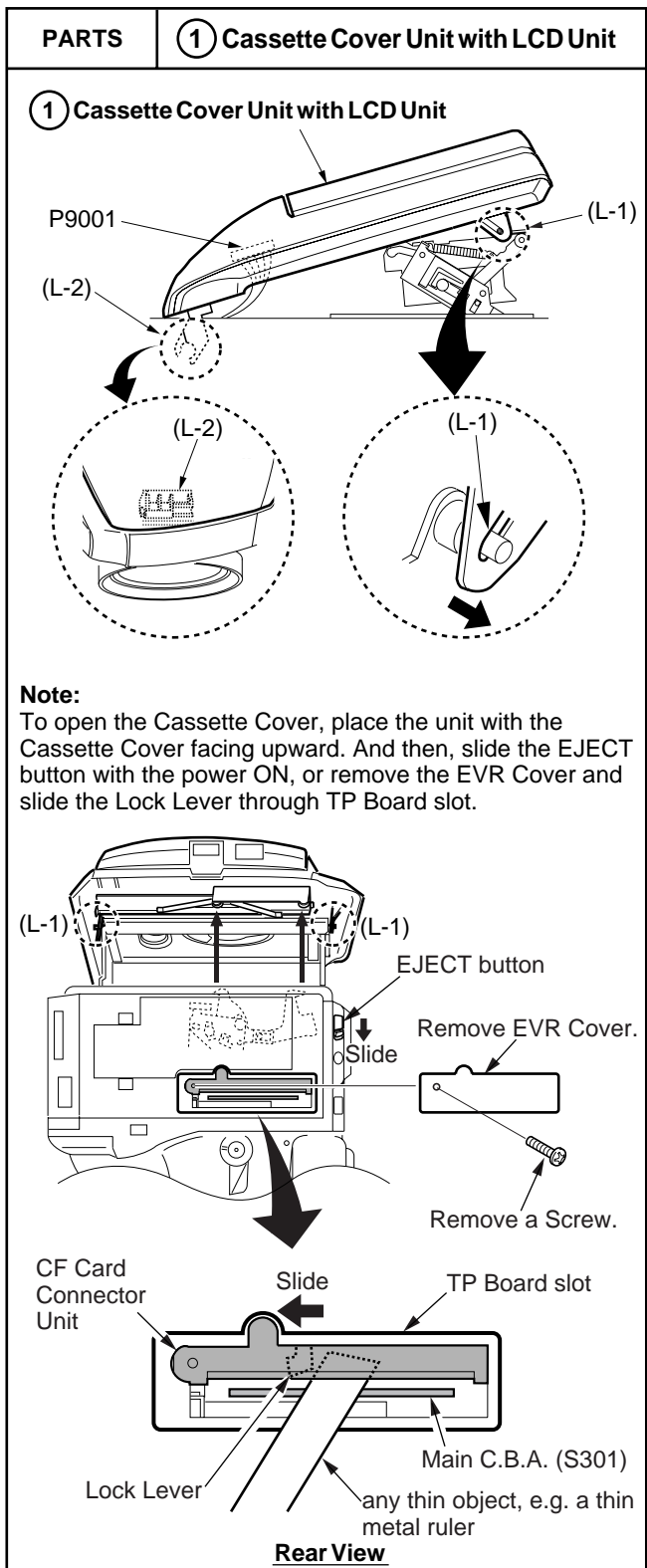


Fig. D2

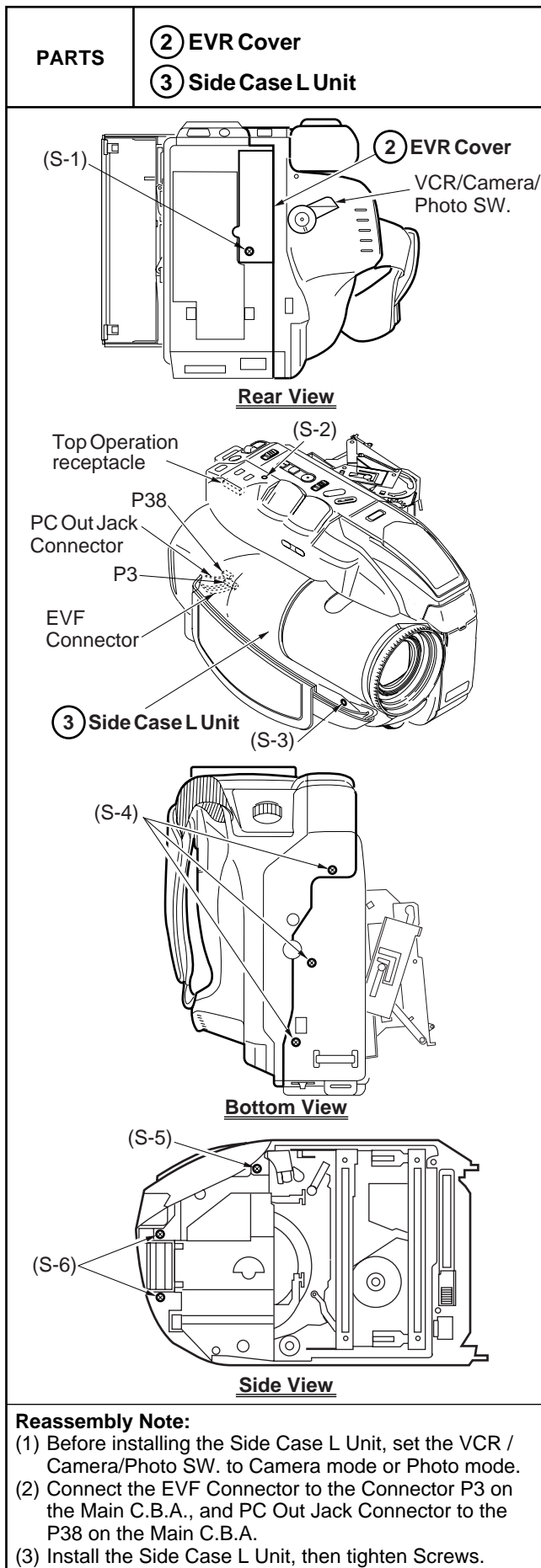


Fig. D3

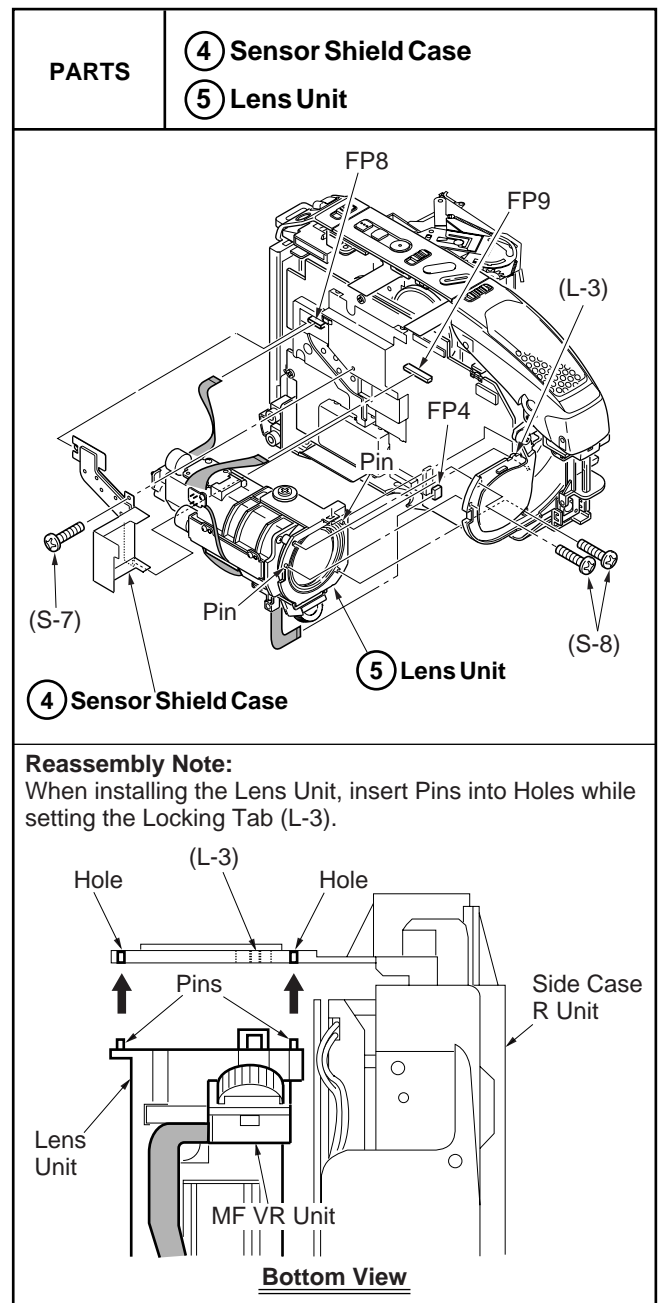


Fig. D4

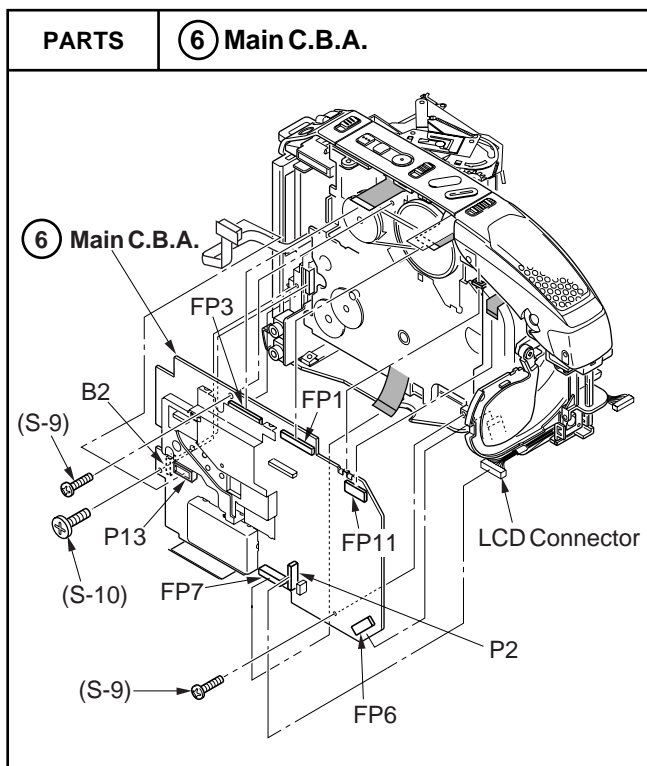


Fig. D5

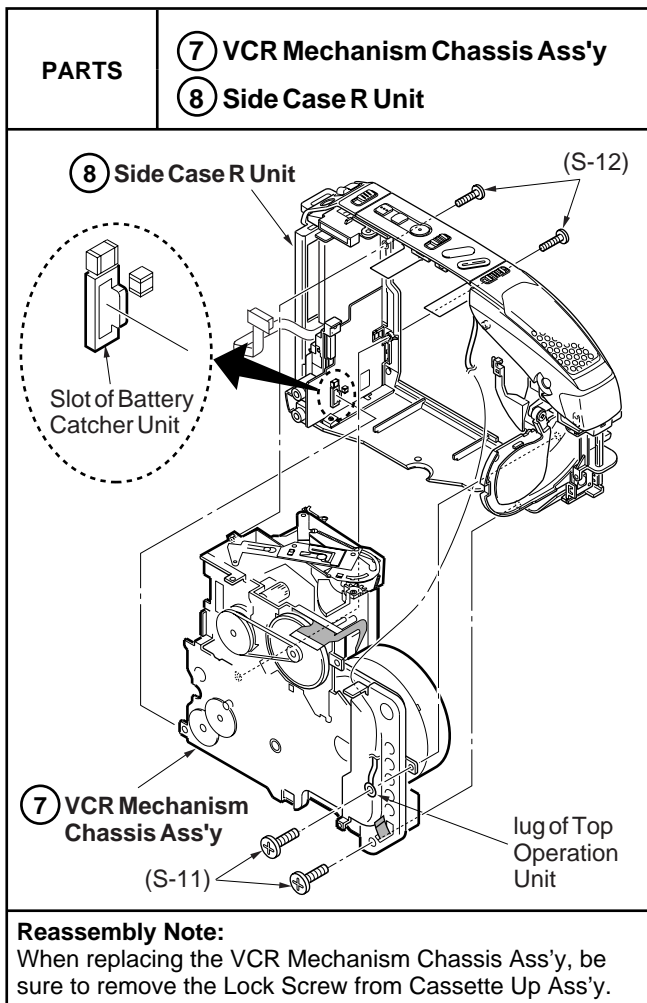


Fig. D6

LCD PORTION

STEP /LOC. No.	PART	Fig. No.	REMOVE
①	Cassette Cover Unit	D7-1	6(S-1), Barrier
②	Relay C.B.A.	D7-2	(S-2), FP9002
③	Cassette Frame	D7-2	4(S-3)
④	LCD Case A Unit	D7-3	2(S-4), 7(L-1)
⑤	LCD Shield Case	D7-4	2(S-5)
⑥	LCD Shaft Unit	D7-4	FP1201, FP1202
⑦	LCD Case B	D7-4	2(S-6)
⑧	LCD C.B.A.	D7-5	FP9001, Unsolder
⑨	LCD Panel Unit	D7-5	8(L-2)
⑩	LCD Lamp Unit	D7-6	3(L-3), LCD Sheet Unit

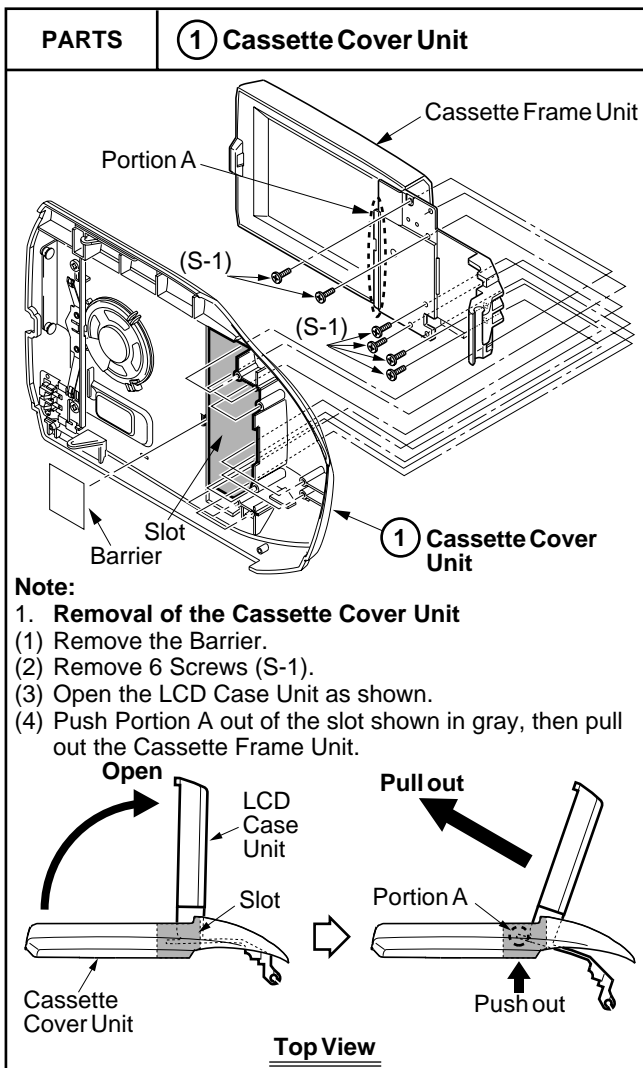


Fig. D7-1

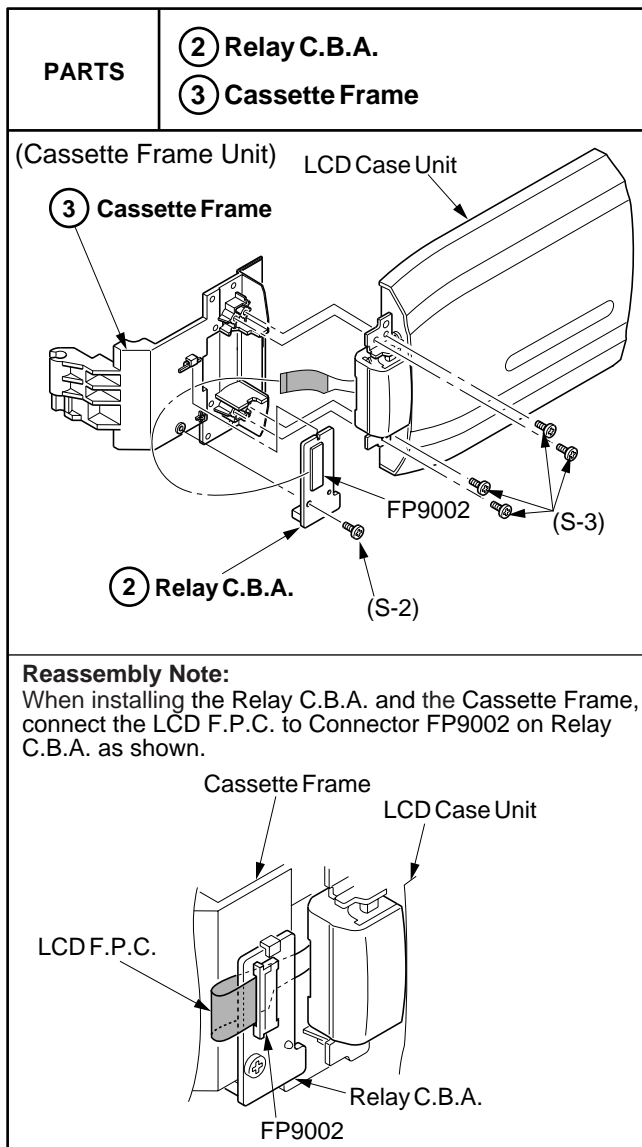


Fig. D7-2

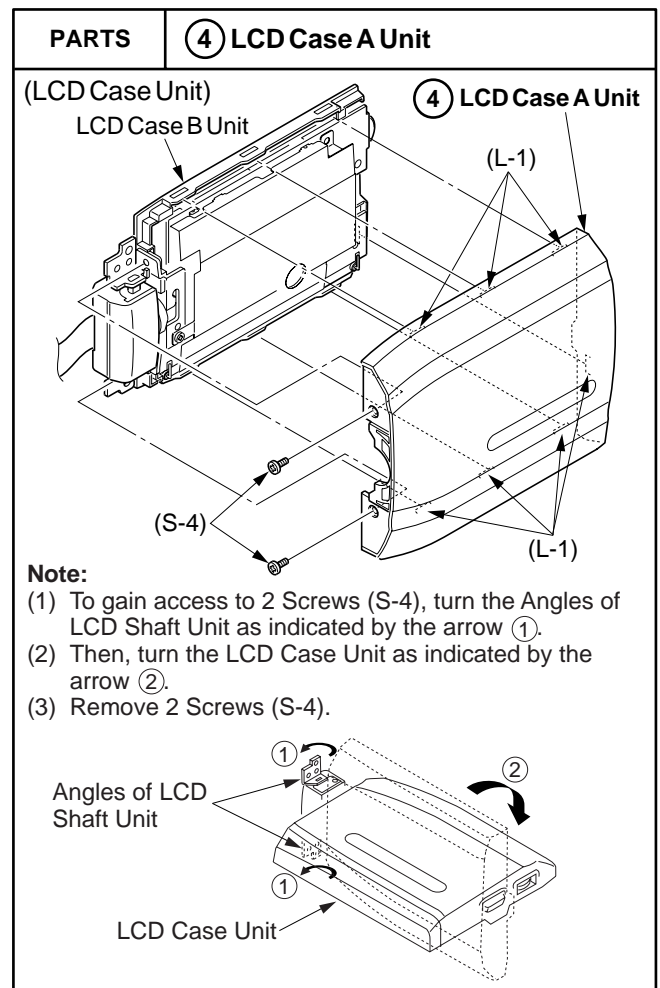


Fig. D7-3

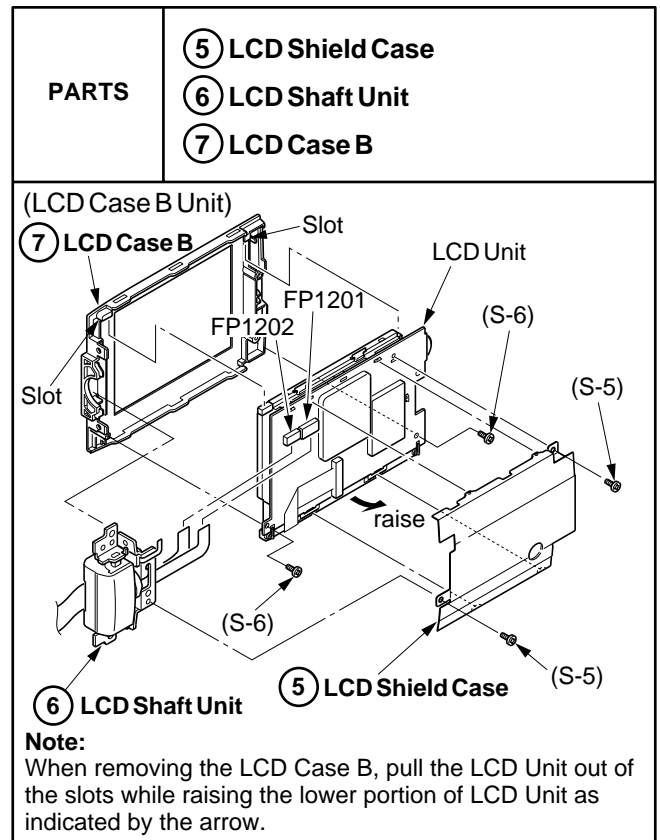


Fig. D7-4

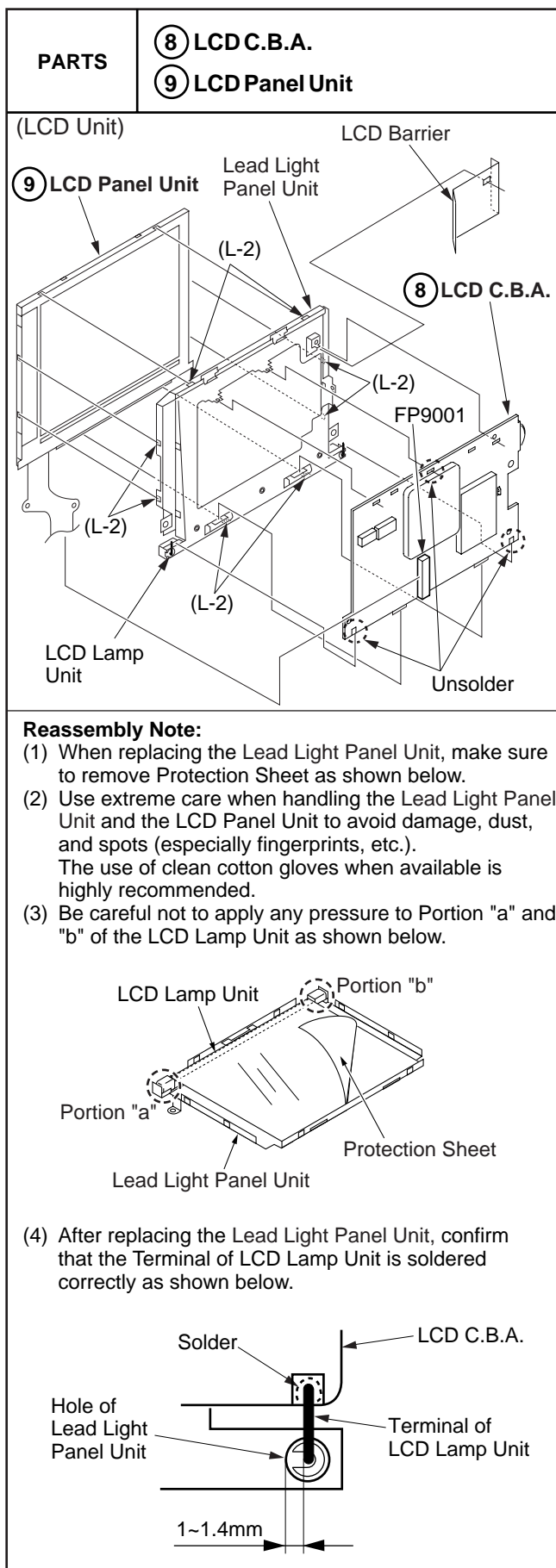


Fig. D7-5

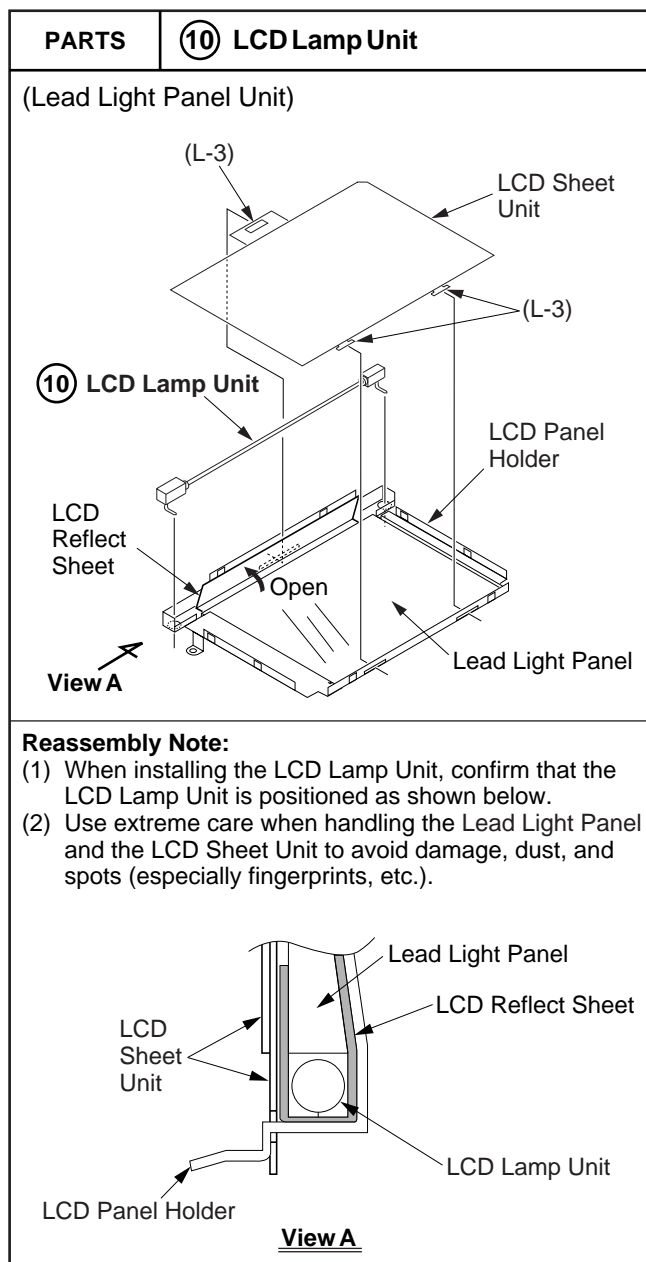


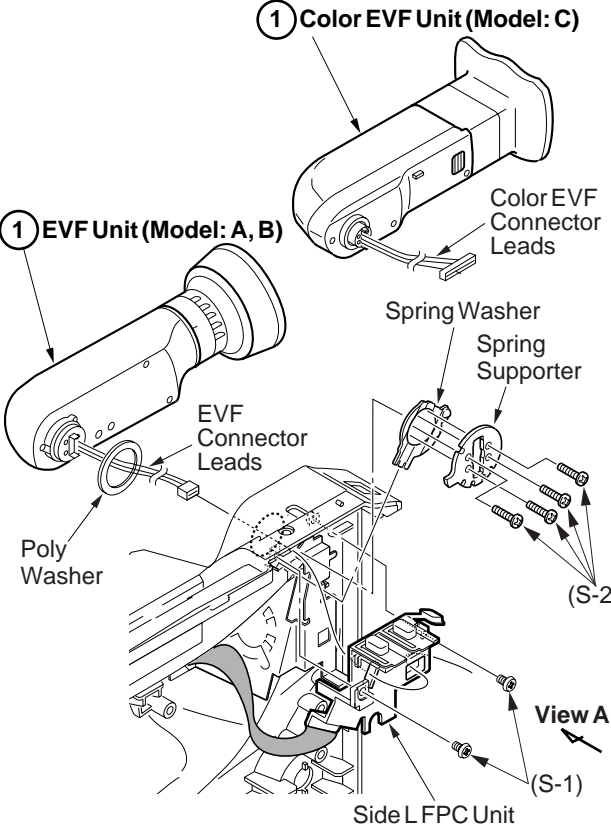
Fig. D7-6

SIDE CASE L PORTION

STEP /LOC. No.	PART	Fig. No.	REMOVE
①	EVF Unit (Color EVF Unit)	D8-1	2(S-1), 4(S-2), Spring Supporter, Spring Washer, Poly Washer
②	Side L FPC Unit	D8-2	(S-3), 3(S-4), 2(L-1), Arm, Arm Holder
③	PC Out Jack C.B.A.	D8-3	2(S-5)

PARTS

① EVF Unit (Color EVF Unit)



① Color EVF Unit (Model: C)

① EVF Unit (Model: A, B)

Color EVF Connector Leads

Spring Washer

Spring Supporter

EVF Connector Leads

Poly Washer

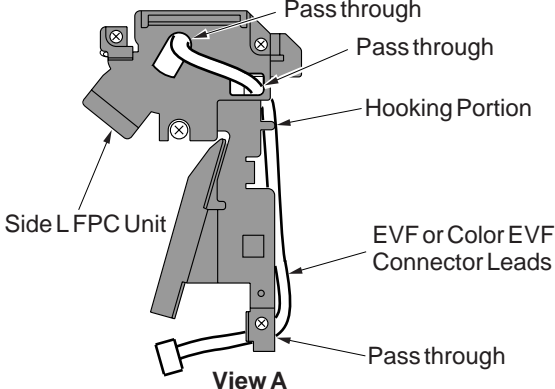
Side L FPC Unit

View A

(S-1)

(S-2)

Reassembly Note:
After installing, confirm that EVF or Color EVF Connector Leads are set correctly on the Side L FPC Unit as shown.



Pass through

Pass through

Hooking Portion

Side L FPC Unit

EVF or Color EVF Connector Leads

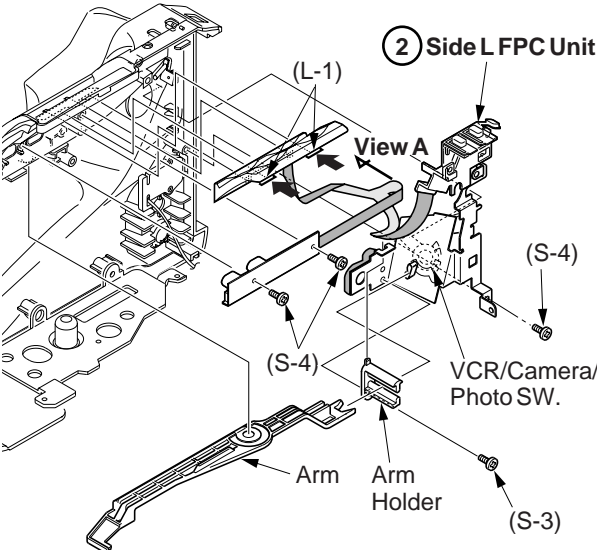
Pass through

View A

Fig. D8-1

PARTS

② Side L FPC Unit



② Side L FPC Unit

(L-1)

View A

(S-4)

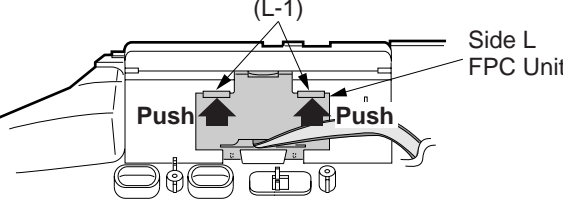
VCR/Camera/Photo SW.

Arm

Arm Holder

(S-3)

Note:
1. **Removal of the Side L FPC Unit**
(1) Remove the Arm first.
(2) Remove Screw (S-3). Then, remove the Arm Holder.
(3) Remove 3 Screws (S-4).
(4) Remove the Side L FPC Unit after releasing 2 Locking Tabs (L-1) by pushing as indicated by the arrow.



(L-1)

Side L FPC Unit

Push

Push

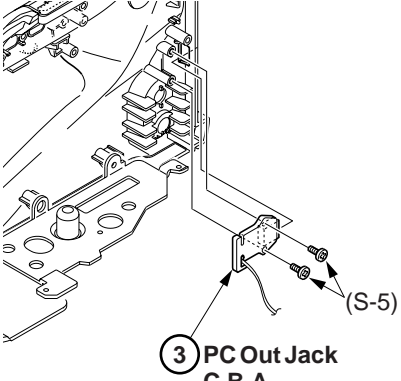
View A

Reassembly Note:
When installing the Side L FPC Unit, set the VCR/Camera/Photo SW. to Camera mode or Photo mode.

Fig. D8-2

PARTS

③ PC Out Jack C.B.A.



③ PC Out Jack C.B.A.

(S-5)

Fig. D8-3

EVF PORTION (Model: A, B)

STEP /LOC. No.	PART	Fig. No.	REMOVE
①	Eye Cap Unit	D9-1	----
②	EVF Case A	D9-2	3(S-1), 5(L-1)
③	EVF Dust Cover	D9-2	----
④	EVF Case B Unit	D9-2	----
⑤	VCR Operation Unit	D9-3	FP901
⑥	CRT	D9-3	CRT Socket Unit
⑦	DY Ass'y	D9-3	P903
⑧	EVF C.B.A.	D9-3	----

Note:

When disassembling or reassembling, make sure that no dust gets in EVF Unit.

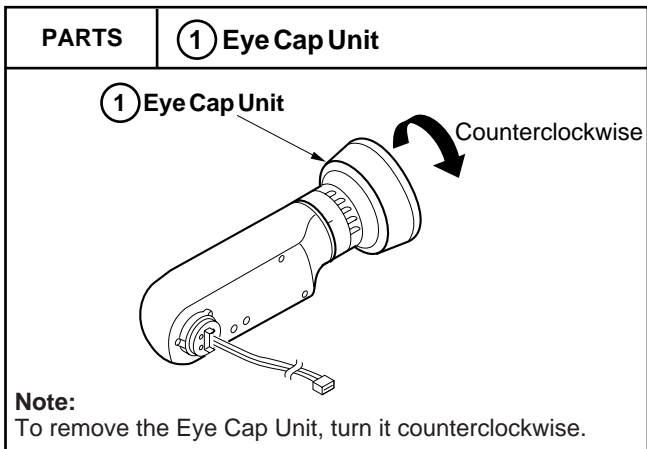


Fig. D9-1

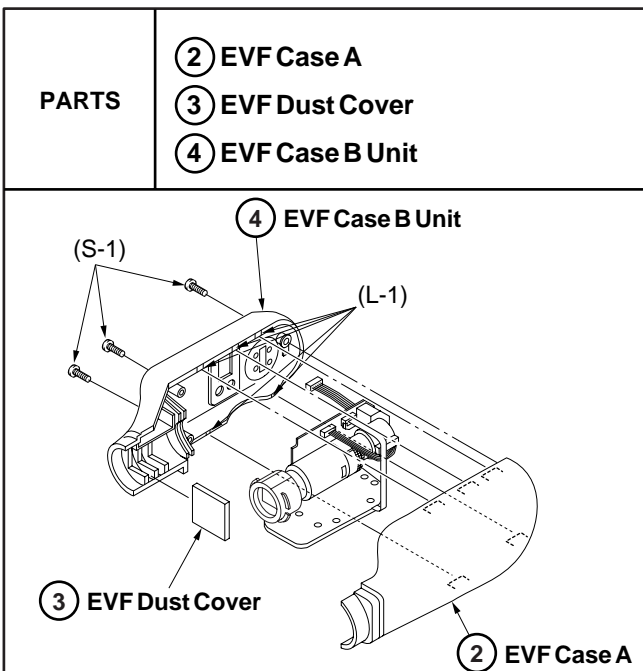


Fig. D9-2

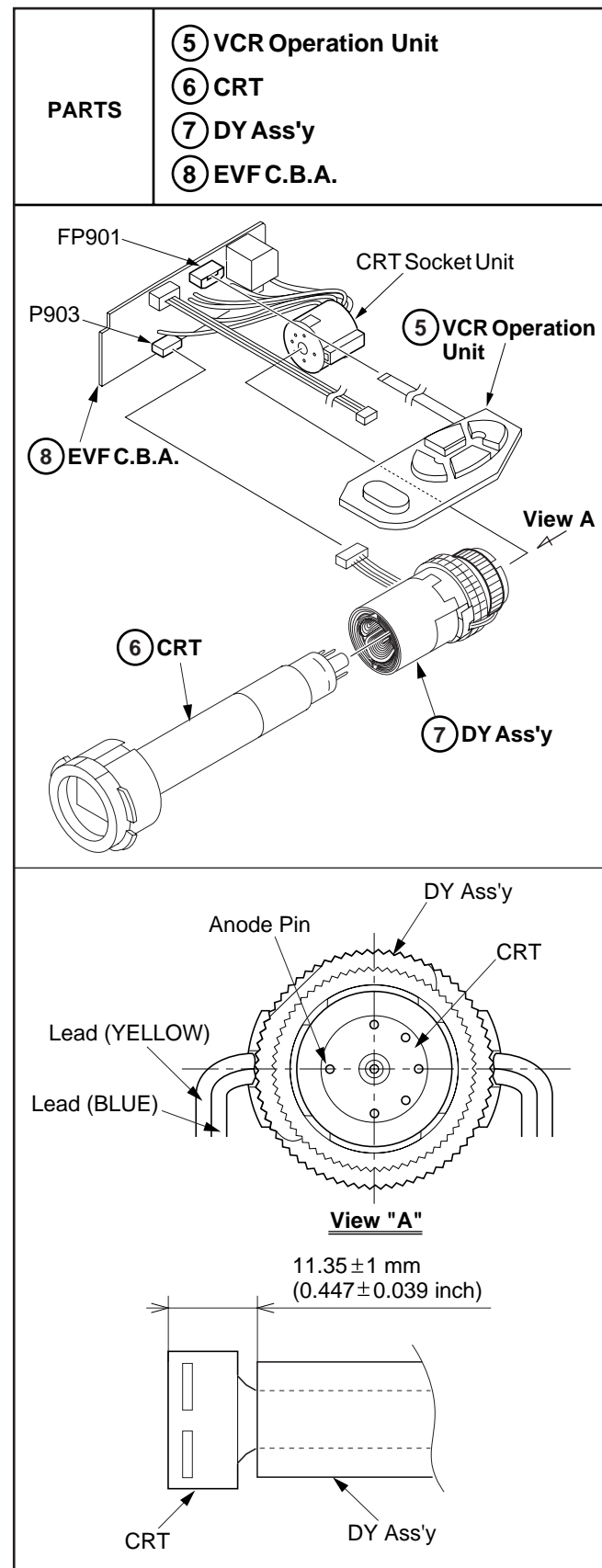


Fig. D9-3

COLOR EVF PORTION (Model: C)

STEP /LOC. No.	PART	Fig. No.	REMOVE
①	Eye Cap Unit	D10-1	----
②	EVF Case A	D10-2	2(S-1), 6(L-1)
③	EVF Case B Unit	D10-2	----
④	Lock Knob	D10-2	Lock Spring
⑤	VCR Operation Unit	D10-2	FP902
⑥	Color EVF A C.B.A.	D10-3	FP901, B902
⑦	Color EVF B C.B.A.	D10-3	4(L-2)
⑧	LCD Cushion	D10-3	----
⑨	EVF LCD Panel Unit	D10-3	----
⑩	EVF Lens Cover A	D10-3	2(L-3)
⑪	Protect Plate	D10-3	----
⑫	EVF Lens Cover B	D10-3	----
⑬	EVF Lens Holder	D10-3	----

Note:
When disassembling or reassembling, make sure that no dust gets in Color EVF Unit.

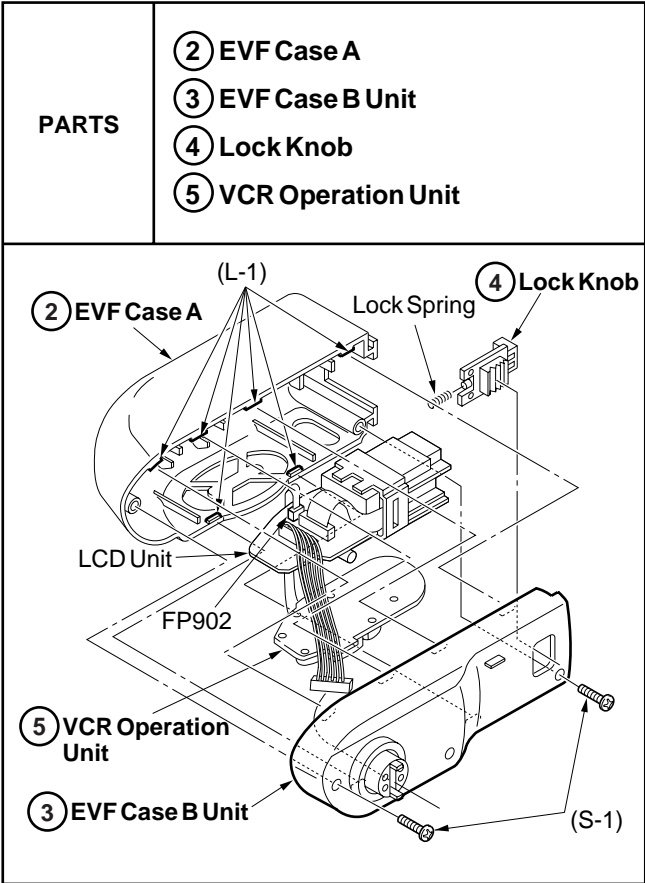


Fig. D10-2

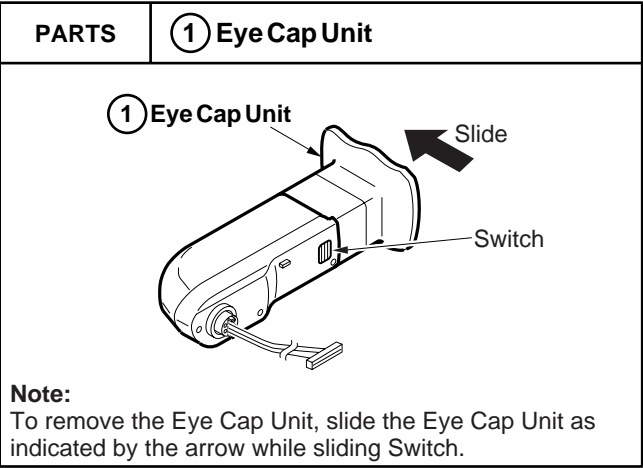
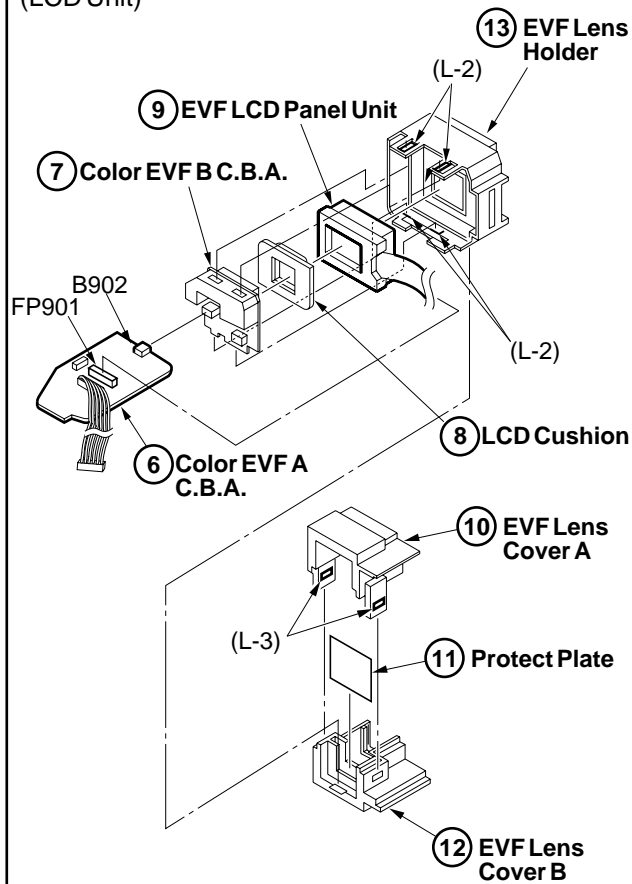


Fig. D10-1

PARTS	⑥ Color EVF A C.B.A.
	⑦ Color EVF B C.B.A.
	⑧ LCD Cushion
	⑨ EVF LCD Panel Unit
	⑩ EVF Lens Cover A
	⑪ Protect Plate
	⑫ EVF Lens Cover B
	⑬ EVF Lens Holder

(LCD Unit)



Note:

Use extreme care when handling the EVF LCD Panel Unit to avoid damage, dust, and spots (especially fingerprints, etc.).

Fig. D10-3

LENS PORTION (A)

STEP /LOC. No.	PART	Fig. No.	REMOVE
①	CCD C.B.A.	D11-1	2(S-1)
②	Filter Rubber	D11-1	----
③	Optical Filter	D11-1	----

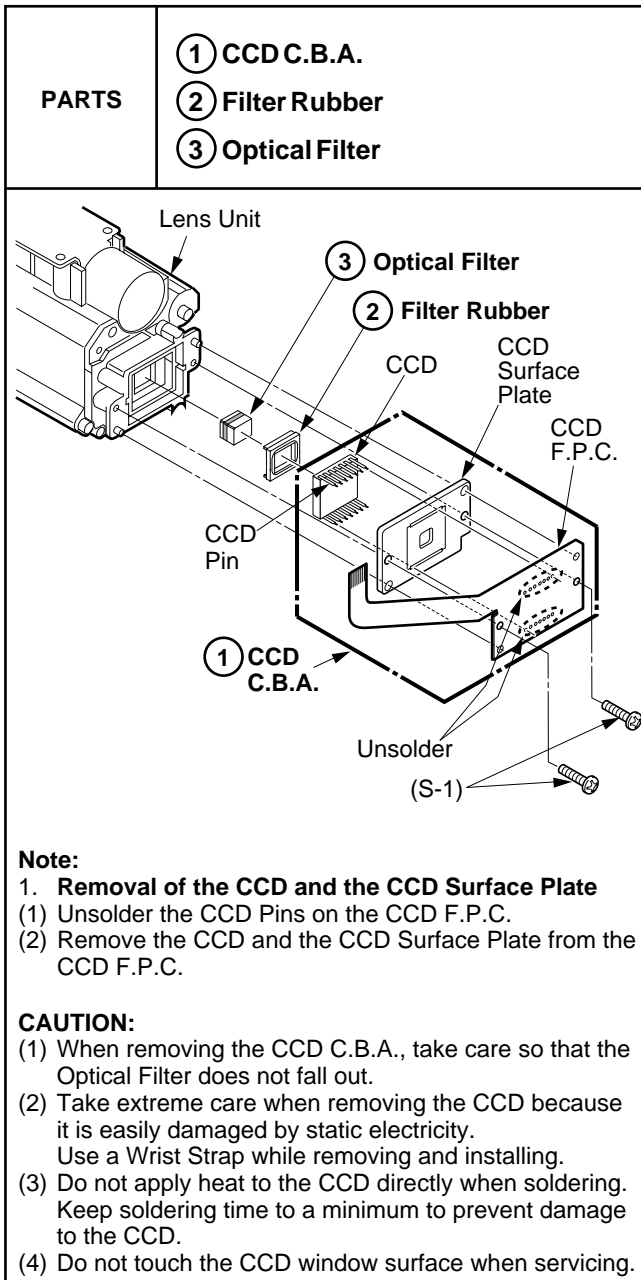


Fig. D11-1

Reassembly Note:

1. Installation of the Optical Filter

- Install the Optical Filter in the Lens Unit correctly.

Note:

Be sure to install the Optical Filter with the thinnest layer of the Optical Filter facing toward the Lens Unit. Make sure that no dust gets on the Optical Filter and in the Lens Unit. Clean the Optical Filter with lens cleaning paper dampened with lens cleaner if necessary.

2. Installation of the Filter Rubber

- Install the Filter Rubber on the Optical Filter with the ridge side facing toward the Optical Filter.

Note:

Make sure that no dust gets on the Filter Rubber.

3. Installation of the CCD C.B.A.

- Place the CCD Surface Plate so that Holes (A) are aligned with Holes (B) on the CCD F.P.C.
- Carefully install the CCD onto the CCD F.P.C. by soldering.

Note:

Do not apply heat to the CCD directly when soldering. Keep soldering time to a minimum to prevent damage to the CCD.

Install the CCD and CCD Surface Plate so that there are no gaps between them.

When installing, do not touch the CCD window surface and make sure that no dust gets on the CCD. Clean the CCD window surface with lens cleaning paper dampened with lens cleaner if necessary.

- Install the CCD C.B.A. to the Lens Unit. Then, secure 2 Screws (S-1) while keeping the CCD C.B.A. pressed toward the upper right corner.

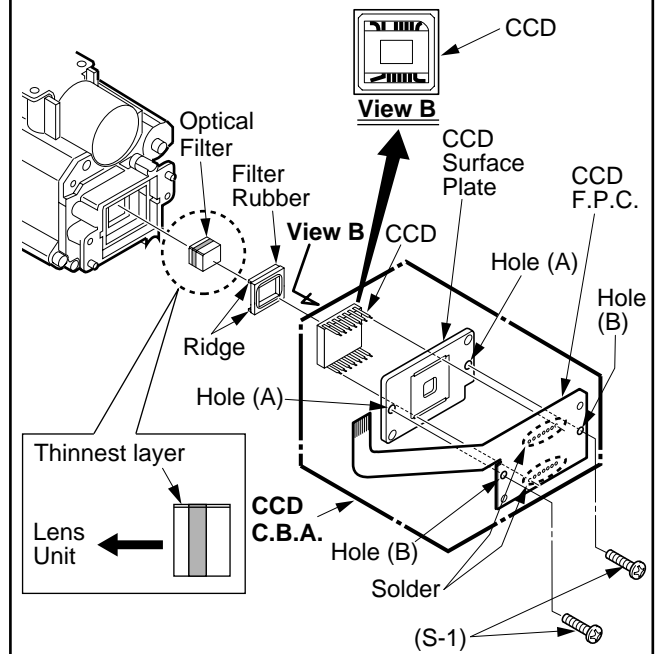


Fig. D11-2

LENS PORTION ②

STEP /LOC. No.	PART	Fig. No.	REMOVE
①	Lens Piece Unit	D12-1	2(S-1), 2(L-1)
②	MFVR Unit	D12-1	(S-2)
③	Focus Motor	D12-2	2(S-3), Unsolder
④	Zoom Motor	D12-2	(S-4), 2(S-5), Unsolder

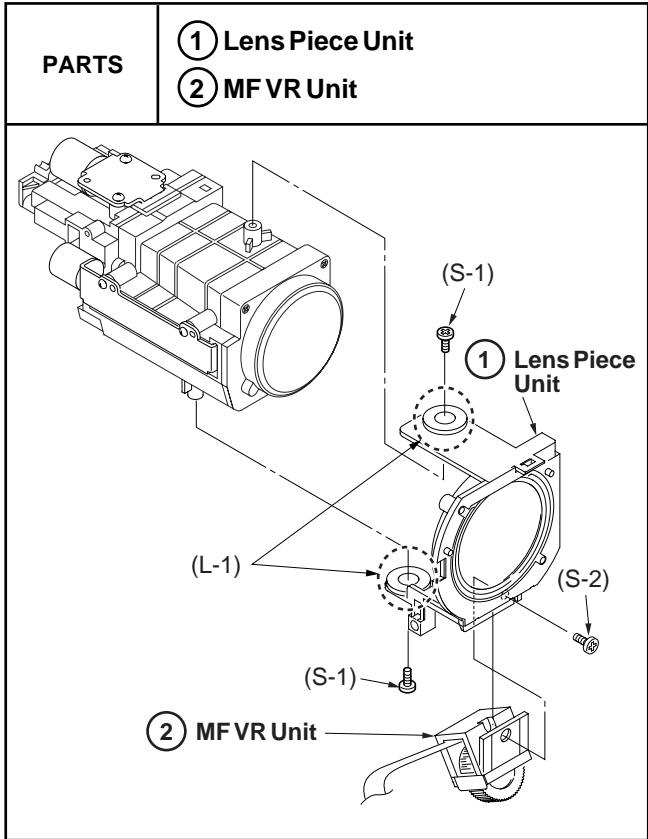


Fig. D12-1

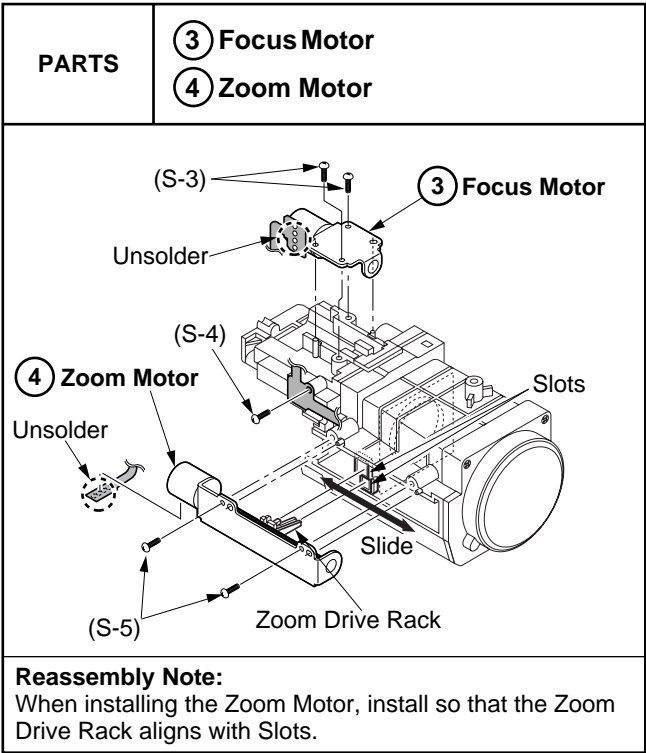


Fig. D12-2

SIDE CASE R PORTION

STEP /LOC. No.	PART	Fig. No.	REMOVE
①	MIC Case Unit	D13-1	2(S-1), (L-1), 2(L-2), R Hinge
②	Top Operation Unit	D13-2	(S-2), (L-3)
③	CF Card Connector Unit	D13-3	-----
④	Battery Catcher Unit	D13-4	(S-3), Buckup Cover, Battery

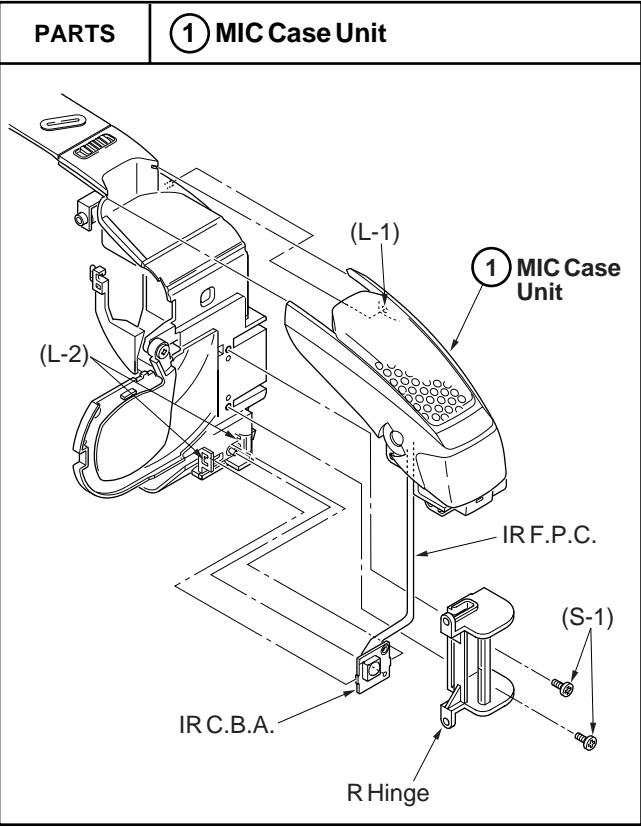


Fig. D13-1

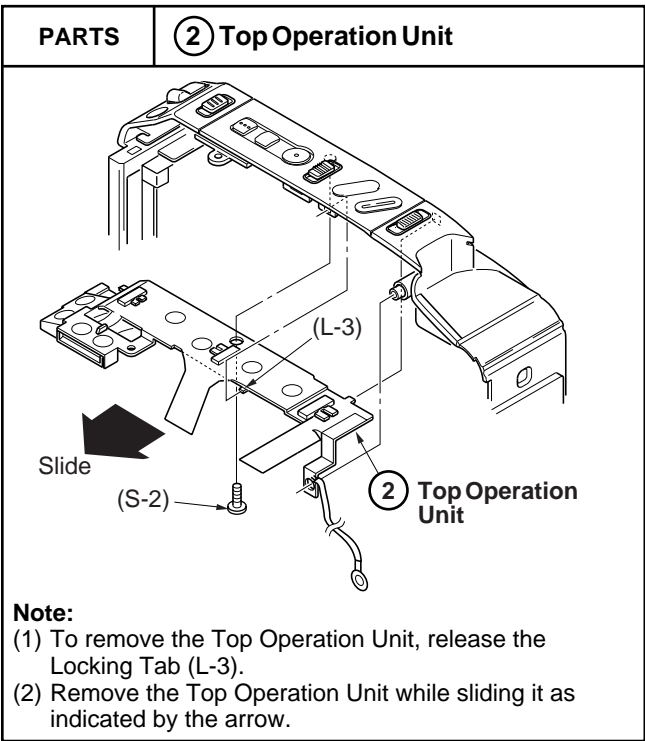


Fig. D13-2

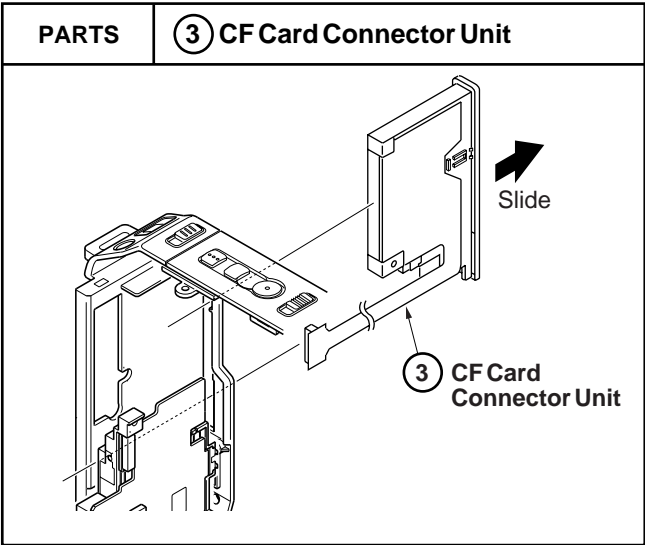
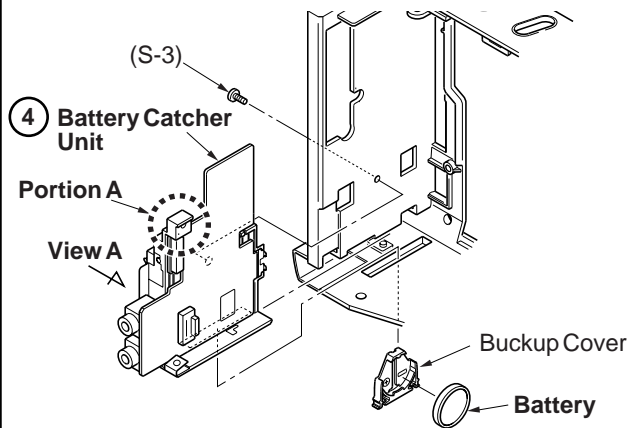


Fig. D13-3

PARTS

④ Battery Catcher Unit



WARNING:
DANGER OF EXPLOSION IF BATTERY IS
INCORRECTLY REPLACED. REPLACE ONLY WITH
THE SAME OR EQUIVALENT TYPE.

CAUTION:
Be careful not to break Portion A when removing or
installing the Battery Catcher Unit.

Note:

- (1) To remove the Battery Catcher Unit, first remove the Backup Cover with the Battery.
- (2) Remove Screw (S-3).
- (3) Slide the Battery Catcher Unit out by pushing Portion B and C as indicated by the arrow.

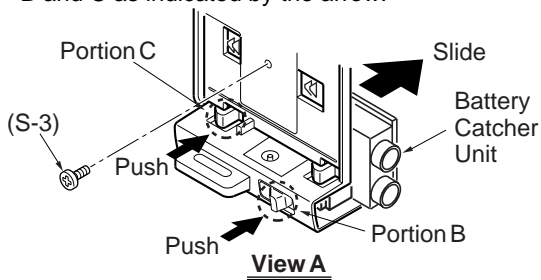


Fig. D13-4

LAMP PORTION

DANGER:
When replacing the Lamp, use only Lamp (Part No. VLLW0015) supplied by Panasonic to reduce the risk of fire. Use a cloth or tissue when handling the Lamp as finger oils will decrease the Lamp life.
To prevent possible burn hazard, remove the Light Cover and allow the Lamp to cool before replacing.

- Note:**
- 1. Lamp is supplied as a Lamp Kit only (Kit No. VULS0001) which contains Lamp, Cushions, and Explanation Sheet.
 - 2. For more details of the Lamp replacement, refer to the Explanation Sheet in the Lamp Kit (VULS0001).

STEP /LOC. No.	PART	Fig. No.	REMOVE
①	Light Cover	D14-1	2(L-1)
②	Lamp	D14-2	-----

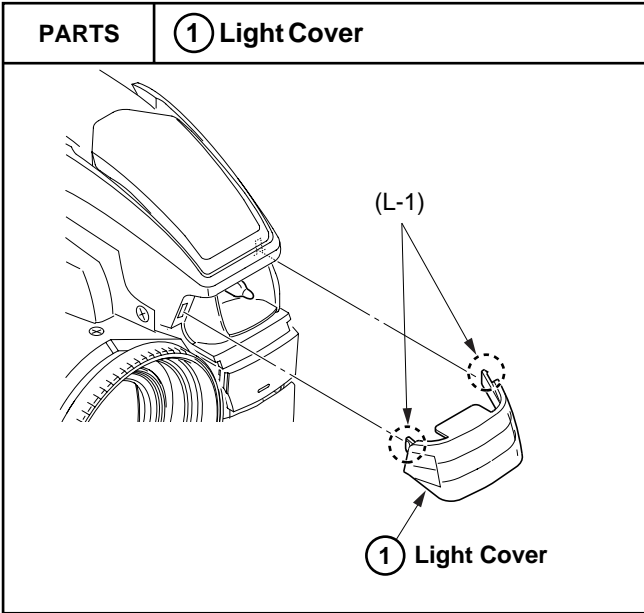


Fig. D14-1

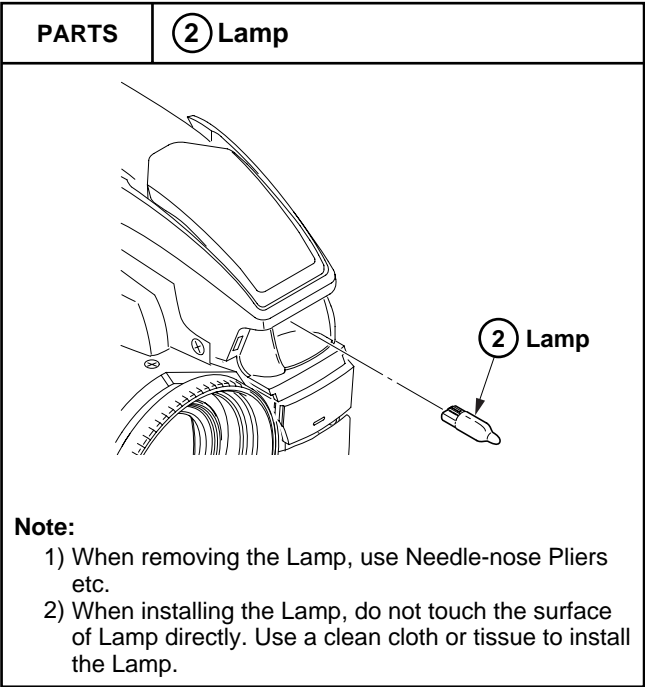


Fig. D14-2

DISASSEMBLY/ASSEMBLY PROCEDURES OF MECHANISM

This procedure starts with the condition that the cabinet parts and Main C.B.A. have been removed.

When reassembling, perform the step(s) in the reverse order.

Perform all disassembly and alignments procedures in **STOP** Position except disassembly and alignment procedures which have the special Notes.

STEP LOC. No.	Prior Step (s)	Part	Fig. No.	Remove
①	-	Cassette Up Unit	DM3-1,2	2(S-1), 2(L-1)
②	-	Cylinder Ass'y	DM4-1	3(S-1), Hooking Portion
③	2	Upper Cylinder Unit	DM4-2,3	(S-1)
④	2	Cylinder/Head Amp F.P.C.	DM4-2,3	FP3501
⑤	2	Bulge Chip	DM4-2,3	(S-2)
⑥	-	P.C.B. Angle	DM5	(S-1)
⑦	-	Mechanism F.P.C. Unit	DM6-1,2	4(S-1), Hooking Portion, Unsolder Gear Alignment (x1)
⑧	1,9	Tension Unit	DM7-1,2	(C-1), Hooking Portion
⑨	1,8	Reel Table Unit	DM7-1,2	(C-2), (W-1)
⑩	1,8,9	Rev Clutch	DM8	(C-1)
⑪	1	Take Gear	DM9-1,2	(L-1)
⑫	1,11	Rev Brake Arm Unit	DM9-1,2	(C-1), Hooking Portion
⑬	-	A/C Head Unit	DM10	(S-1), Unsolder
⑭	-	Capstan Belt	DM11	-
⑮	6,13,14	Capstan Unit	DM12	2(S-1), (S-2)
⑯	1,6,7,11,12,14	Idler Arm Unit	DM13	(C-1)
⑰	2	Mechanism Support Angle	DM14	(S-1)
⑱	1	Reduction Gear B	DM15	(C-1)
⑲	-	Reduction Gear A	DM16	(C-1)
⑳	1,18	Reduction Gear Unit	DM16	2(S-1)
㉑	1	Pinch Arm Unit	DM17-1,2	(C-1)
㉒	1	Opener	DM17-1,2	(S-1)
㉓	1,11,21,22	P5 Arm Unit	DM17-1,2	Hooking Portion
㉔	1,17	Takeup Post Unit	DM18-1,2	(S-1)
㉕	1	Supply Post Unit	DM18-1,2	(S-2)
㉖	-	Impedance Roller Unit	DM19-1,2	(C-1)
㉗	1,2,13,24,25	Loading Base Unit	DM19-1,2	4(S-1)
㉘	1,2,8,9,13,24,25,27	Takeup Loading Arm Unit	DM20	- Gear Alignment (x1)
㉙	1,2,8,9,13,24,25,27	Supply Loading Arm Unit	DM21-1,2,3	- Gear Alignment (x2)
㉚	8,9,19	Loading Motor Unit	DM22	2(S-1)
㉛	1,2,8,9,10,18,19,20,24,25,27,29,30	Main Cam Unit	DM22	-
㉜	1,2,8,9,10,18,19,20,24,25,27,29,30,31	Pinch Toggle	DM22	-

↑
A

↑
B

↑
C

↑
D

↑
E

How to read chart shown above:

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.
These numbers are also used as the identification (location) No. of parts in Figures.

B: Steps to be completed prior to the current step.

C: Part to be removed or installed.

D: Fig. No. showing Procedure or Part Location.

E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.
3(S-1)=3 Screws (S-1), 3(W-1)=3 Washers (W-1),
(C-1)=Cut Washer (C-1), 2(L-1) =2 Looking Tabs (L-1)

CAUTION:

- Use a wrist strap to provide ESD protection while disassembling or assembling.
- Removed Cut Washer is not reusable. If removed, install a new one.

Following Cut Washers are to be used:

Ref. No.	Part No.
409	VMXW0217
411	VMXW0213
419	VMX2026

INNER PARTS LOCATION

Note: BOX indicates alignment (Gear alignment or Tape Interchangeability adjustment) required when a part is replaced.

TOP VIEW

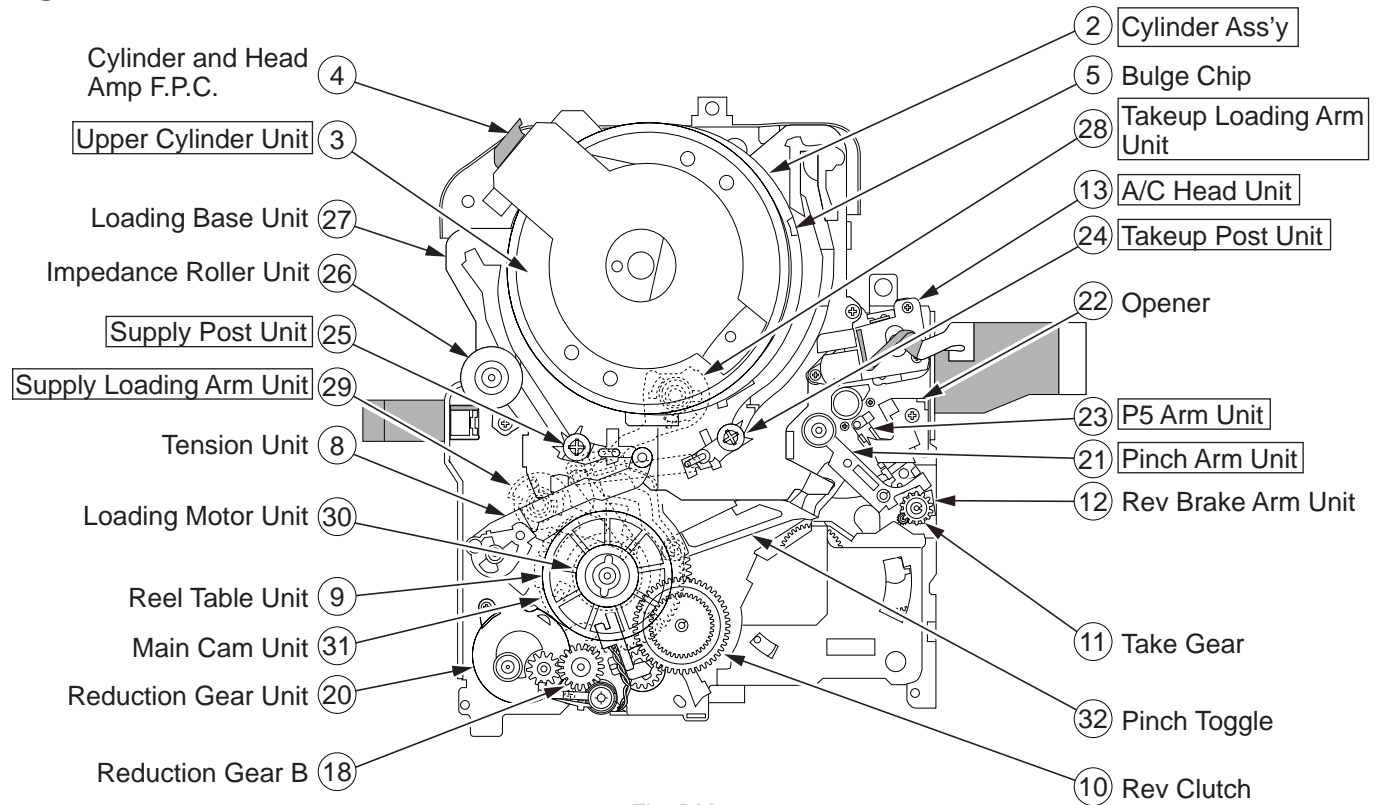


Fig. DM1-1

BOTTOM VIEW

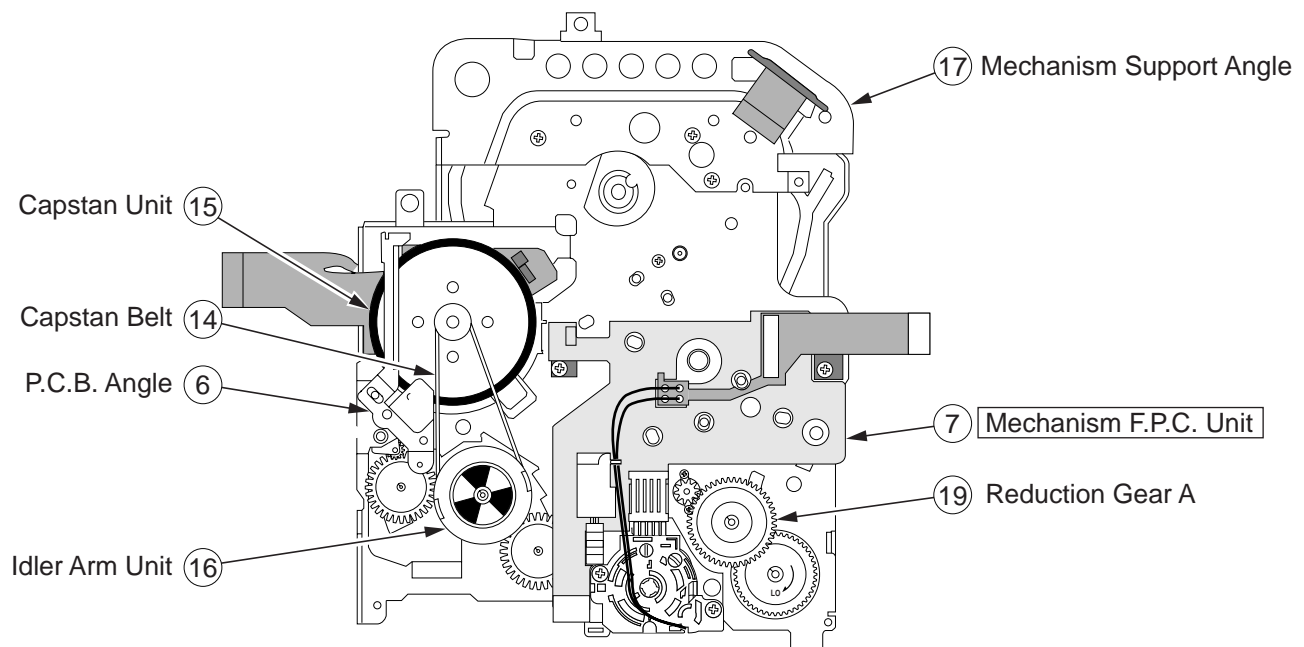


Fig. DM1-2

STOP Position Confirmation

Check the following alignment points to confirm that the Mechanism is in **STOP** Position from the Top and Bottom View.

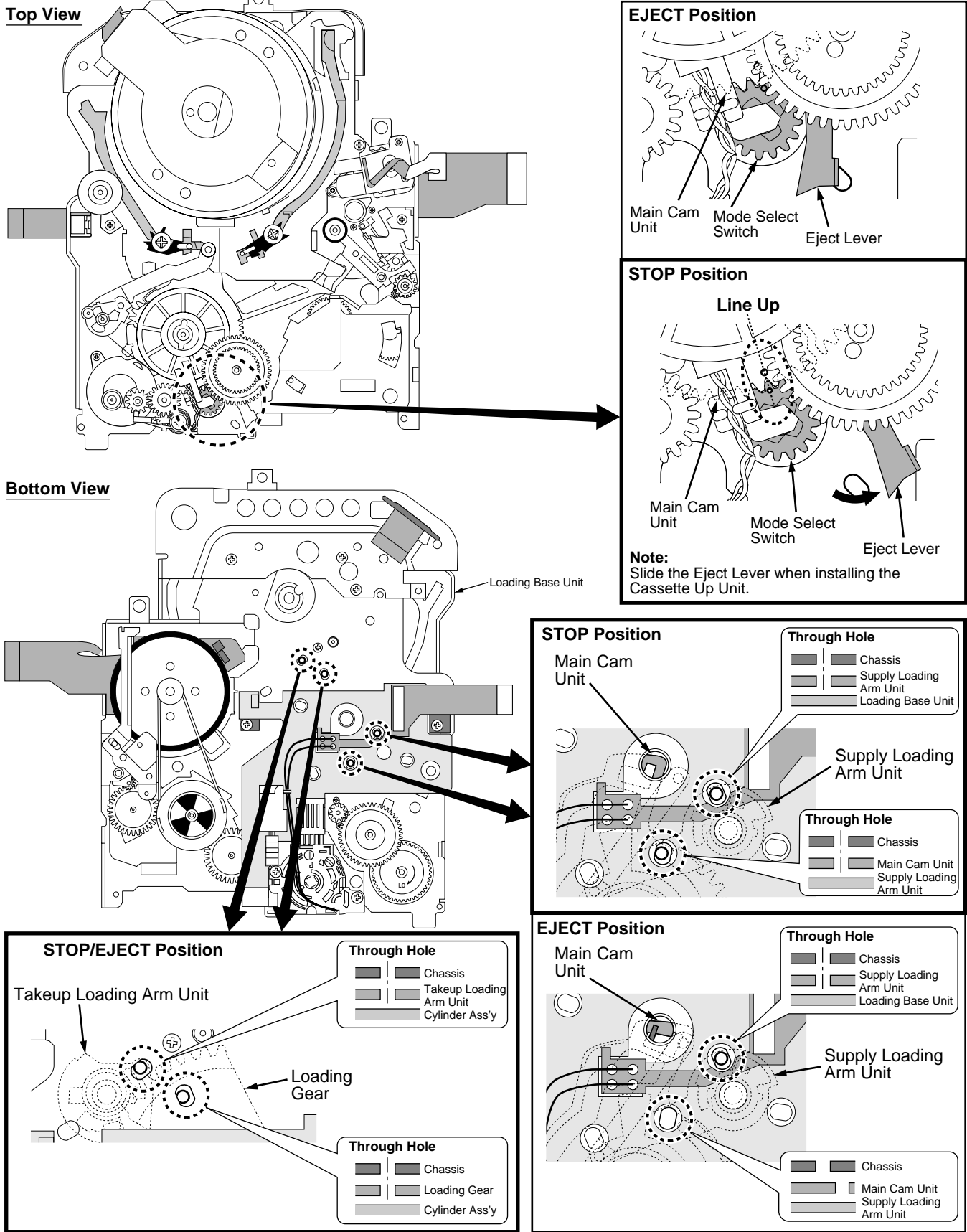
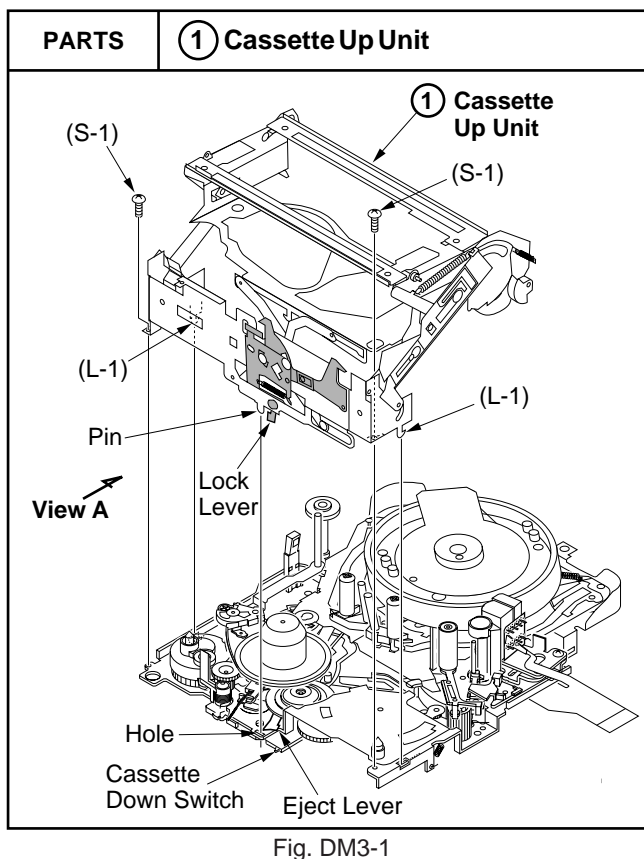


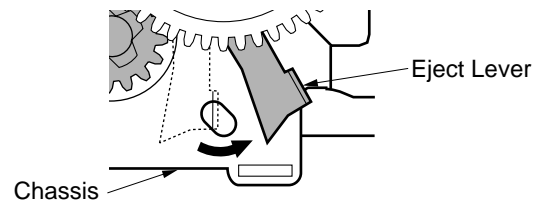
Fig. DM2



Reassembly Note:

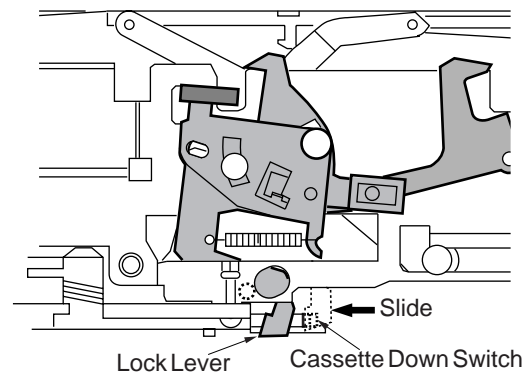
1. Installation of the Cassette Up Unit

- (1) Before installing the Cassette Up Unit, confirm that the Eject Lever is slid as shown.



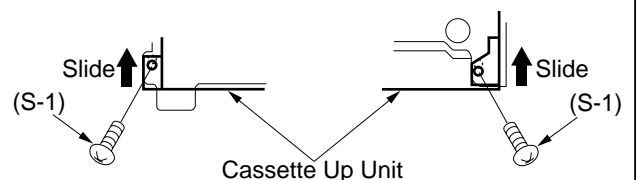
Top View

- (2) Slide the Lock Lever. (Otherwise, the Lock Lever may damage the Cassette Down Switch when installing the Cassette Up Unit.)



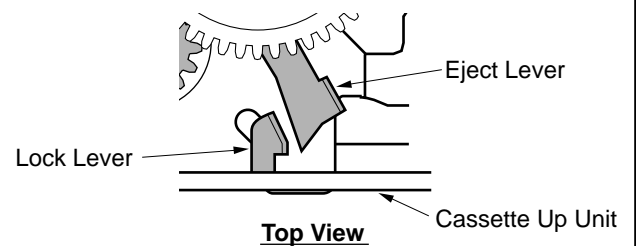
View A

- (3) Then, Install the Cassette Up Unit while setting 2 Locking Tabs (L-1). Next, insert Pin into Hole on the Chassis.
- (4) Slide the Cassette Up Unit as far as possible as indicated by the arrow. Then, tighten 2 Screws (S-1).



Top View

- (5) After installing the Cassette Up Unit, confirm that the Lock Lever is on the left of the Eject Lever as shown.



Top View

Fig. DM3-2

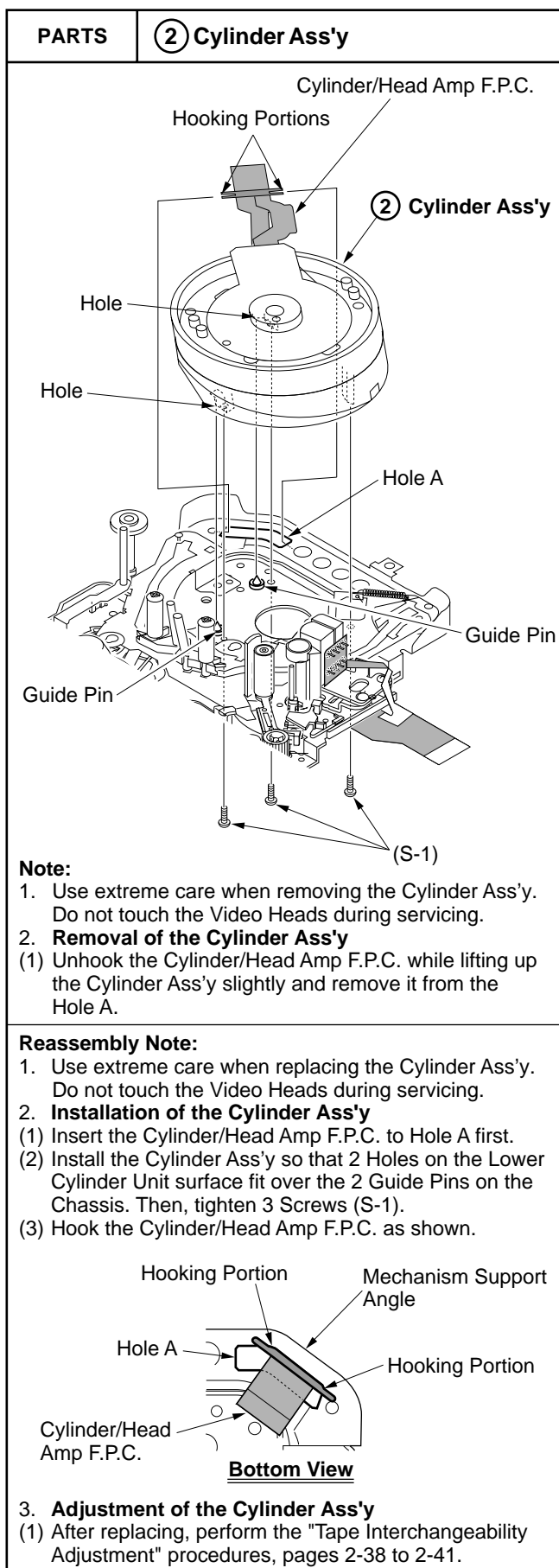
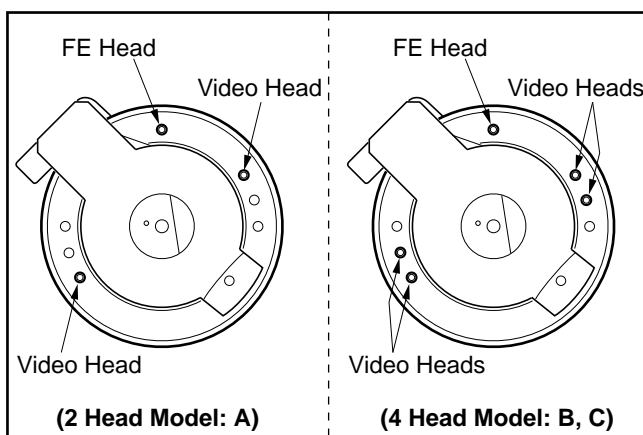


Fig. DM4-1



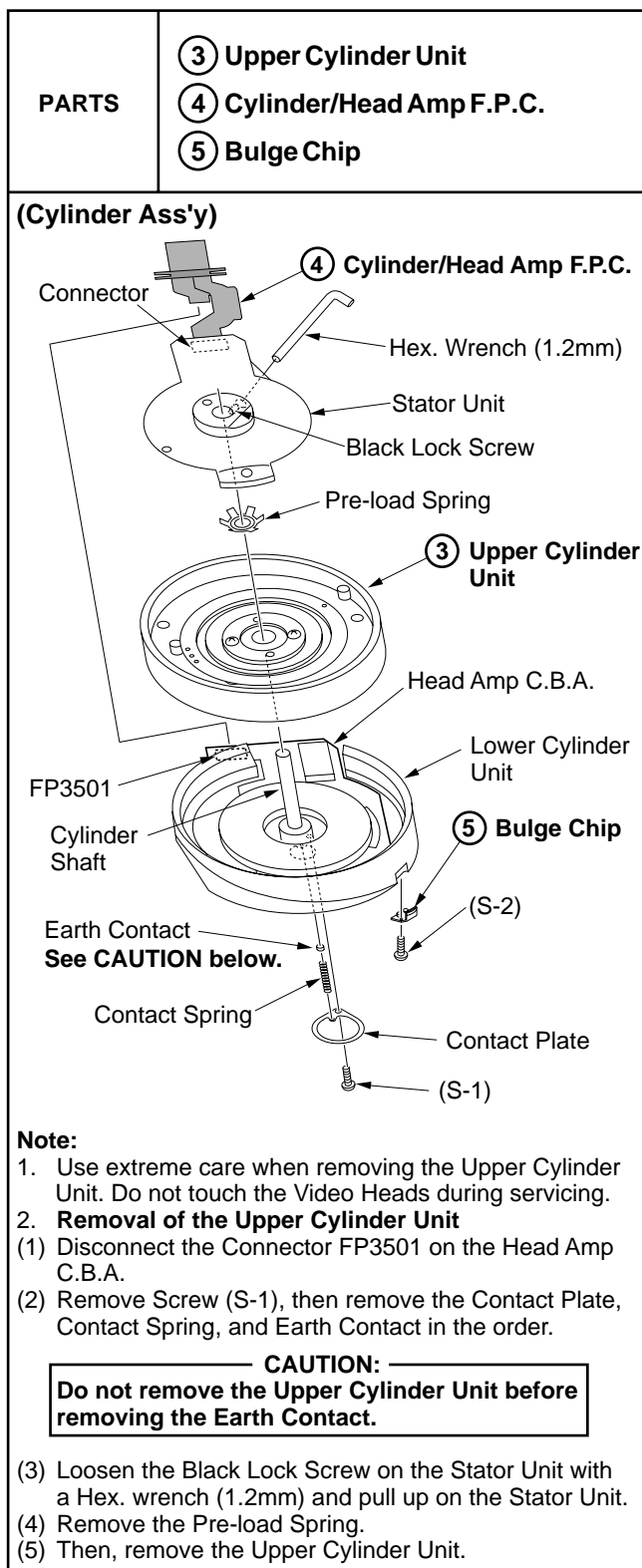


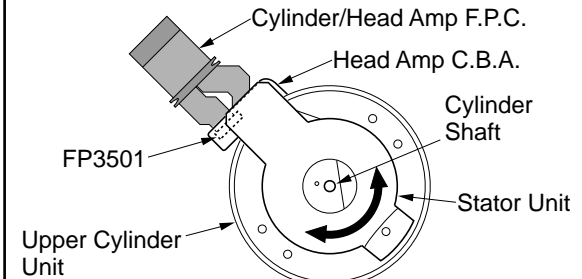
Fig. DM4-2

Reassembly Note:

1. Use extreme care when replacing the Upper Cylinder Unit. Do not touch the Video Heads during servicing.
2. **Installation of the Upper Cylinder Unit**

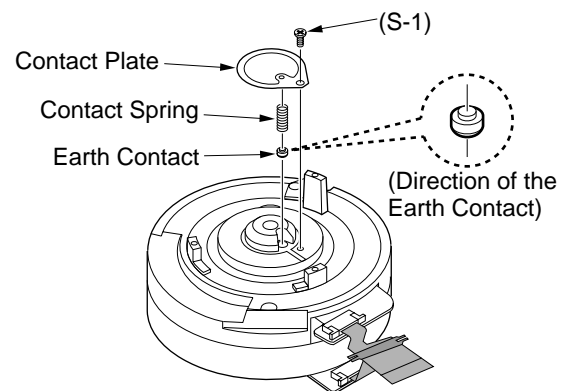
- CAUTION:**

(1) **Confirm that the Earth Contact is not in the Lower Cylinder Unit.**
- (2) Install the Upper Cylinder Unit to the Lower Cylinder Unit.
 - (3) Confirm the position of the Pre-load Spring, and install it to the Cylinder Shaft.
 - (4) Install the Stator Unit to the Cylinder Shaft. Rotate the Stator Unit to be positioned as shown.



Top View

- (5) Connect the Cylinder/Head Amp F.P.C. with the Connector FP3501 on the Head Amp C.B.A.
- (6) Tighten the Black Lock Screw (700g/cm) on the Stator Unit with a Hex. wrench (1.2mm) while lightly grasping (700g +/- 300g) the top and bottom of the Cylinder Ass'y.
- (7) Install the Earth Contact, Contact Spring, and Contact Plate in the order. Then, tighten Screw (S-1).



Bottom View

3. **Adjustment of the Upper Cylinder Unit**
 - (1) After replacing, perform the "Tape Interchangeability Adjustment" procedures, pages 2-38 to 2-41.

Fig. DM4-3

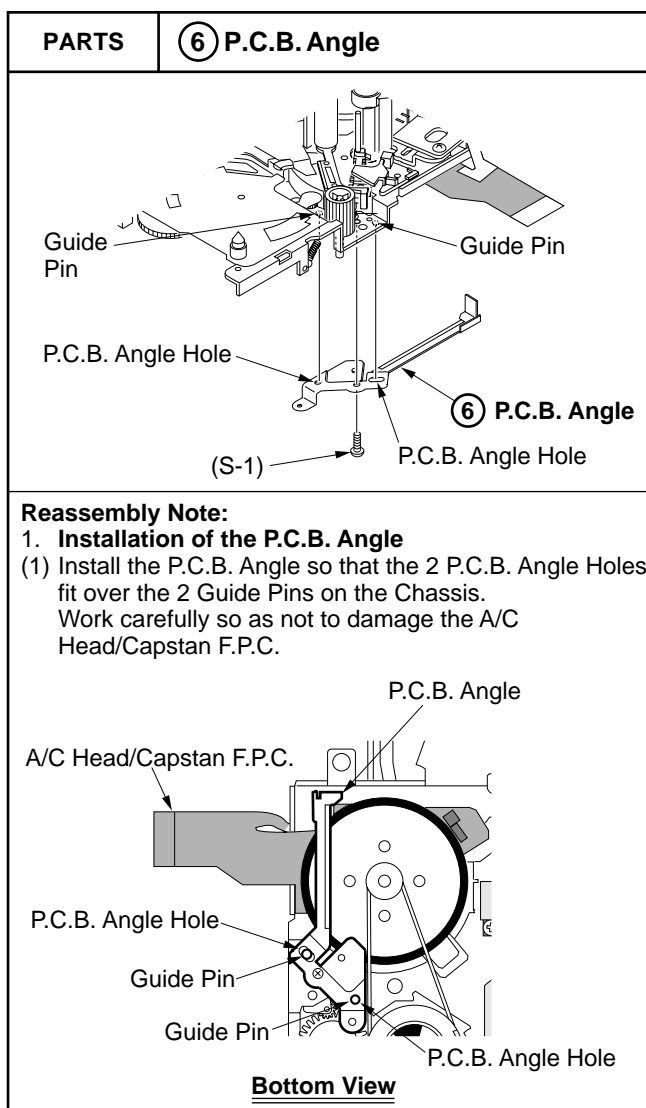


Fig. DM5

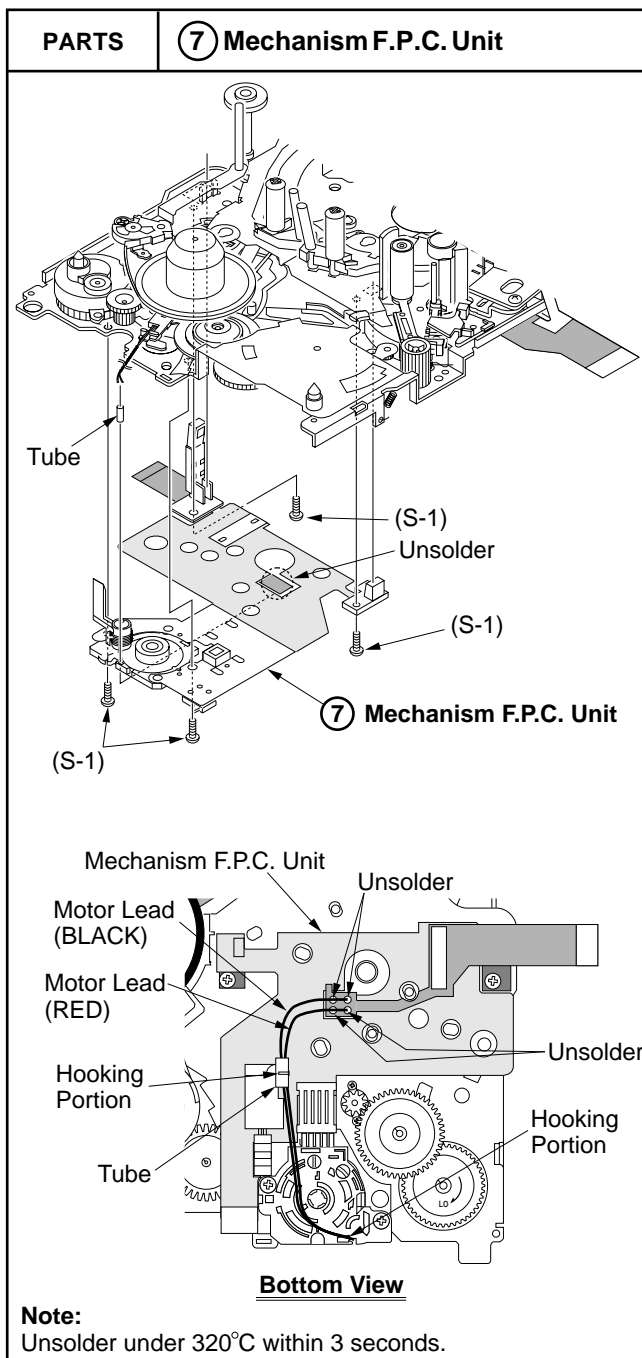


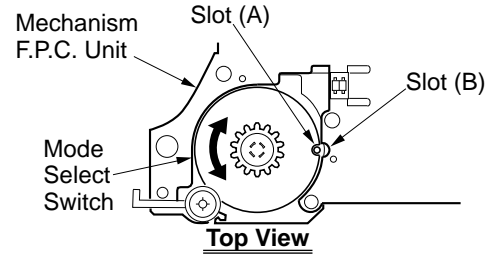
Fig. DM6-1

Reassembly Note:

1. Gear Alignment

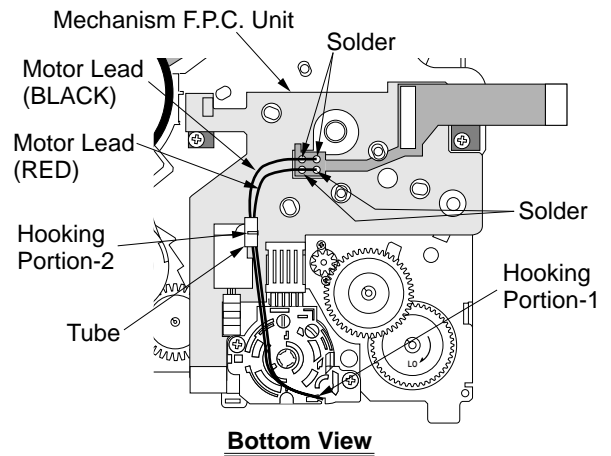
• The Mode Select Switch and the Main Cam Unit

- (1) Before installing the Mechanism F.P.C. Unit, rotate the Mode Select Switch of Mechanism F.P.C. Unit so that Slot (A) is aligned with Slot (B).



2. Installation of the Mechanism F.P.C. Unit

- (1) Install the Mechanism F.P.C. Unit to the bottom of the Chassis. Then, tighten 4 Screws (S-1).
 (2) Hook the Motor Leads to Hooking Portion-1.
 (3) Pass the tube through the Motor Leads.
 (4) Solder the Motor Leads as shown.
Note: Solder under 320°C within 3 seconds.
 (5) Hook the Motor Leads and the tube to Hooking Portion-2 together.
 (6) Confirm that the Motor Leads are set correctly on the Mechanism F.P.C. Unit as shown.



- (7) Confirm that the Mode Select Switch is in STOP Position from the Top side.

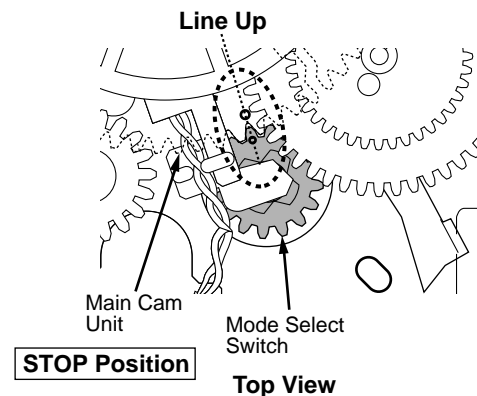


Fig. DM6-2

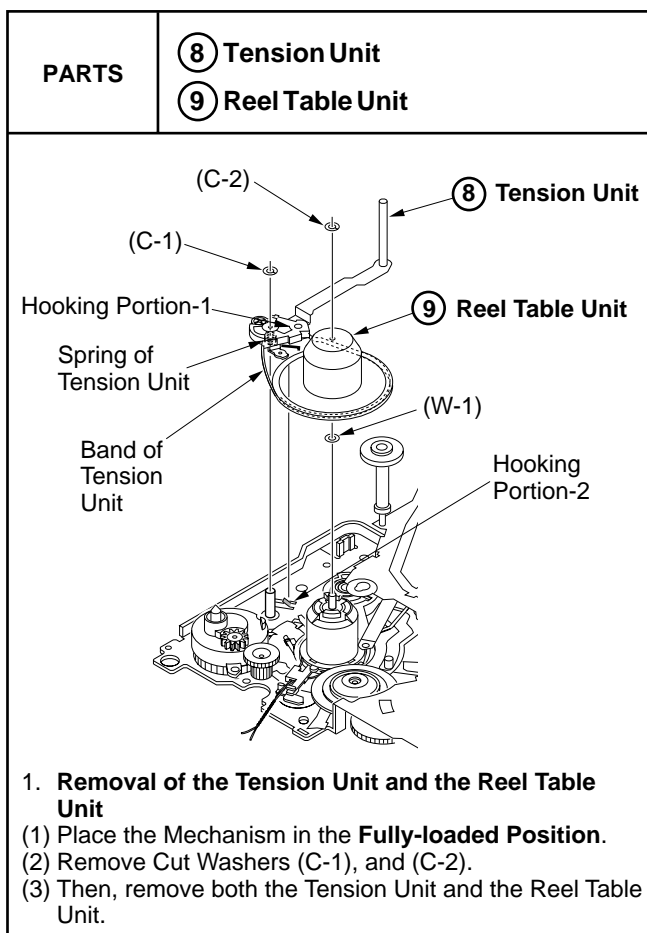
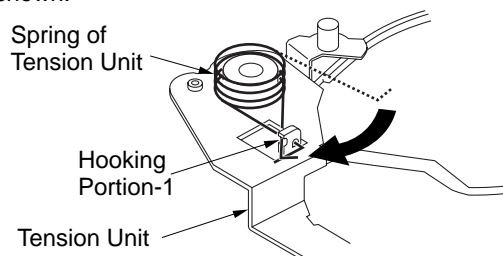


Fig. DM7-1

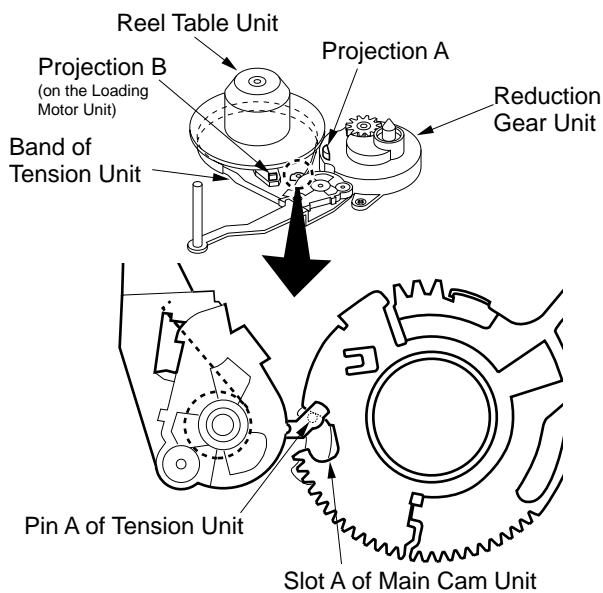
Reassembly Note:

1. Installation of the Reel Table Unit and the Tension Unit

- (1) Before installing the Reel Table Unit and the Tension Unit, place the Mechanism in the **Fully-loaded Position** by rotating the Gear of Reduction Gear Unit.
- (2) Install Washer (W-1) onto the Loading Motor Unit first.
- (3) Hook the Spring of Tension Unit to the Tension Unit as shown.



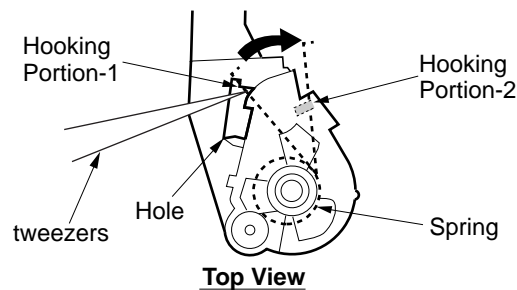
- (4) Hook the Band of Tension Unit to the groove of Reel Table Unit.
- (5) Install both the Reel Table Unit and Tension Unit to the Chassis so that the Pin A of Tension Unit is set into Slot A of the Main Cam Unit. Confirm that the Band of Tension Unit keeps off Projection A and B.



Fully-loaded (Play) Position

Top View

- (5) Unhook the Spring of Tension Unit from Hooking Portion-1 with tweezers etc. inserted through Hole to let it hook to Hooking Portion-2 on the chassis.



Top View

- (6) Install Cut Washer (C-2), and (C-1).

Fig. DM7-2

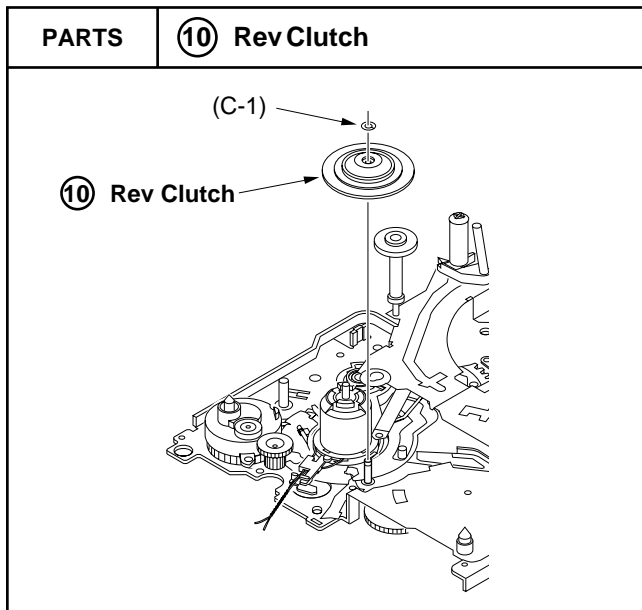


Fig. DM8

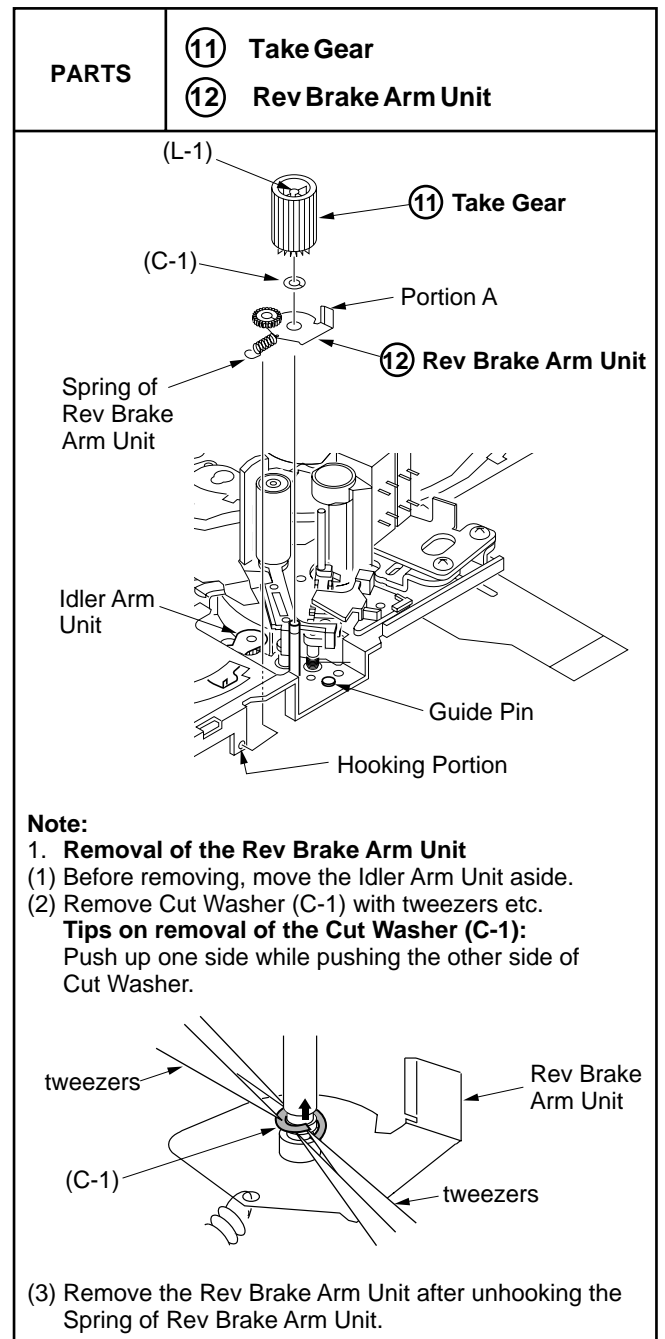
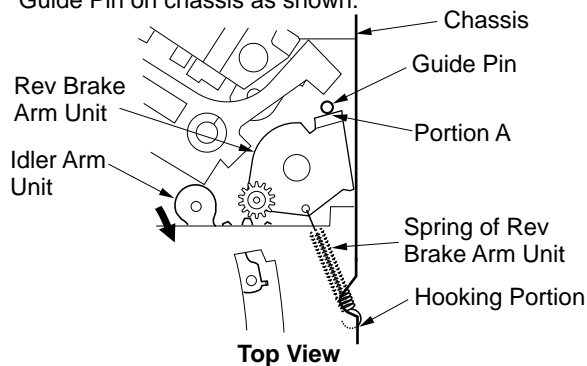


Fig. DM9-1

Reassembly Note:

1. Installation of the Rev Brake Arm Unit

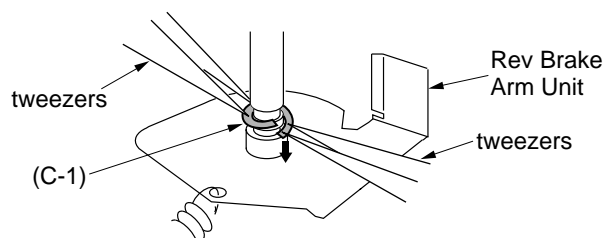
- (1) Before installing the Rev Brake Arm Unit, move the Idler Arm Unit aside as indicated by the arrow.
- (2) Hook the Spring of Rev Brake Arm Unit to the Hooking Portion. After hooking the Spring, confirm that Portion A of the Rev Brake Arm Unit does not pass over the Guide Pin on chassis as shown.



- (3) Install Cut Washer (C-1) with tweezers.

Tips on installation of the Cut Washer (C-1):

Push down one side while pushing the other side of Cut Washer.



- (4) After installing, confirm that Cut Washer (C-1) can be rotated.

2. Installation of the Take Gear

- (1) Before installing the Take Gear, move the Idler Arm Unit aside as indicated by the arrow.
- (2) Install the Take Gear while rotating so it engages with Gear A so as not to cause damage. Then, confirm that Locking Tab (L-1) is set.

Note: Use extreme care when installing the Take Gear. If Locking Tab (L-1) is broken, install a new Take Gear.

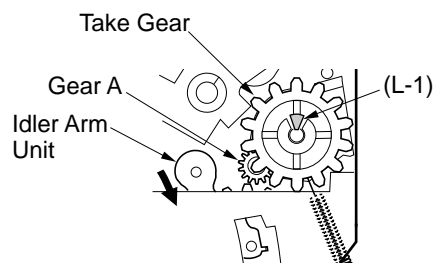
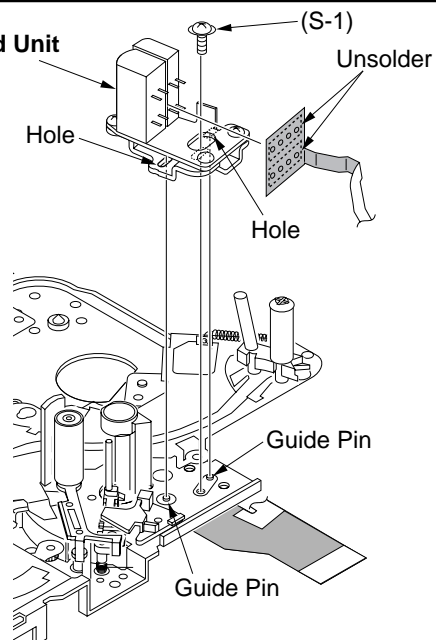


Fig. DM9-2

PARTS

⑬ A/C Head Unit

⑬ A/C Head Unit



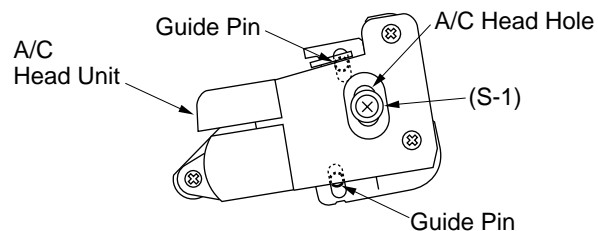
Note:

Unsolder under 320°C within 3 seconds.

Reassembly Note:

1. Installation of the A/C Head Unit

- (1) Install A/C Head Unit so that 2 Guide Pins are in holes on the A/C Head Unit.
- (2) Tighten Screw (S-1) (1.0 ~ 1.3 kgf•cm) in the approximate center of the hole.



2. Adjustment of the A/C Head Unit

- (1) After replacing, perform the "Tape Interchangeability Adjustment" procedures, pages 2-38 to 2-41.

Fig. DM10

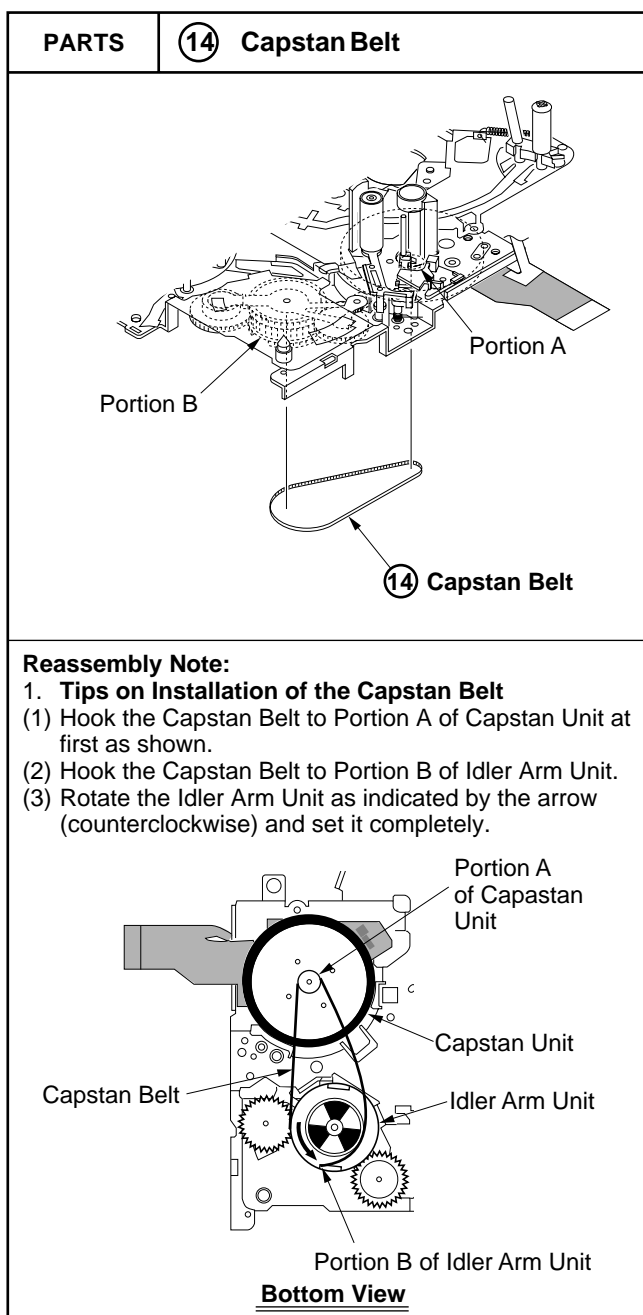


Fig. DM11

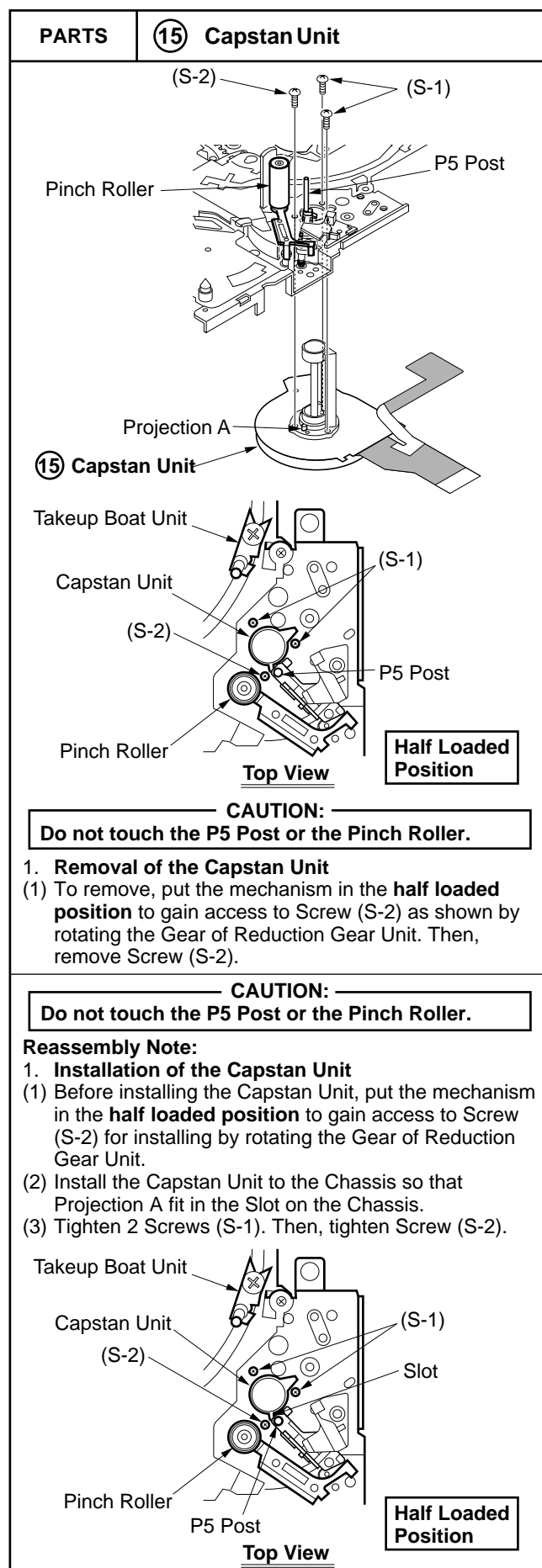


Fig. DM12

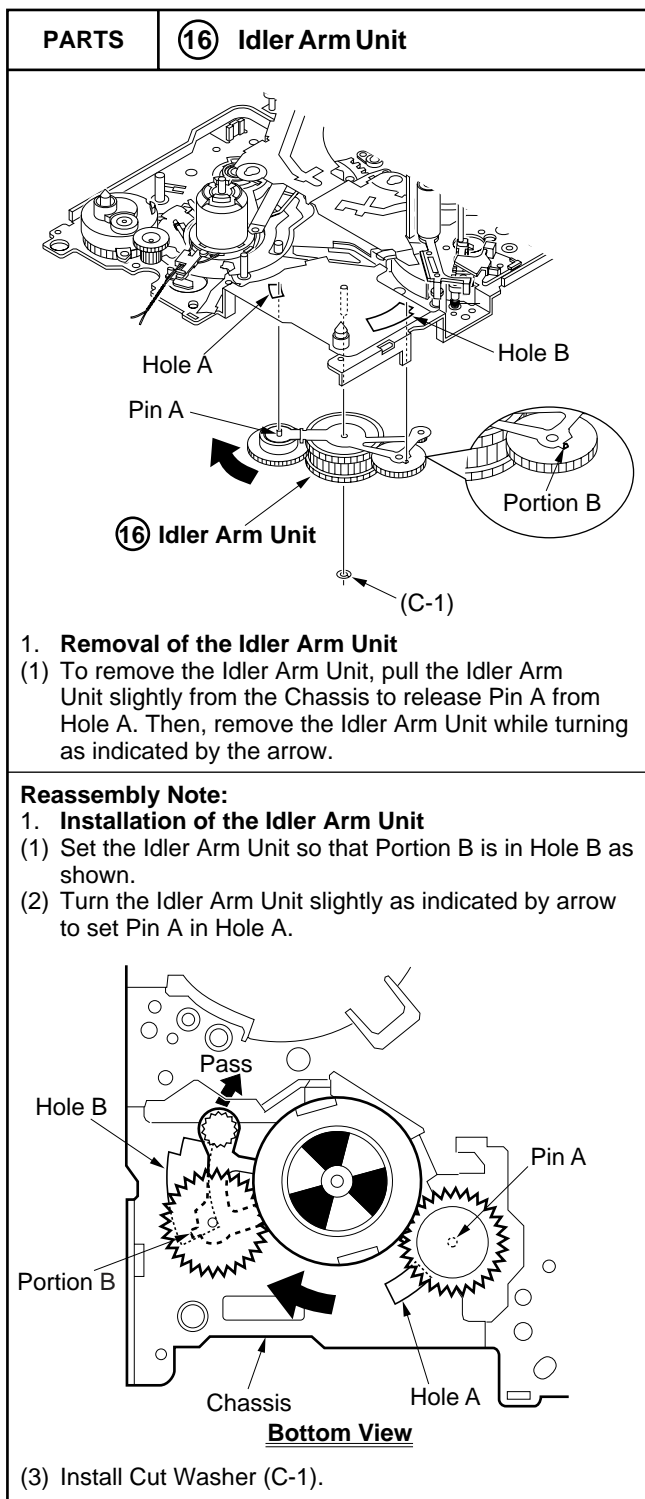


Fig. DM13

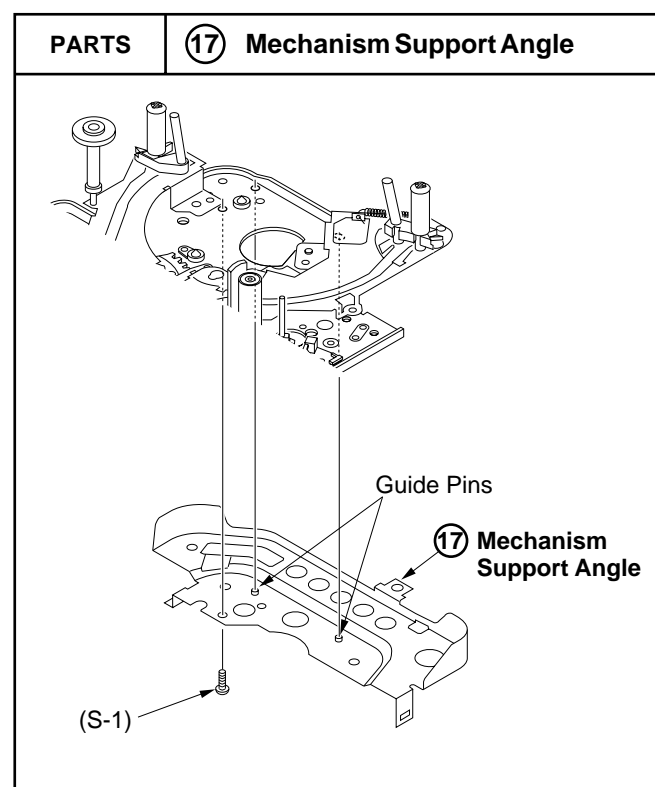


Fig. DM14

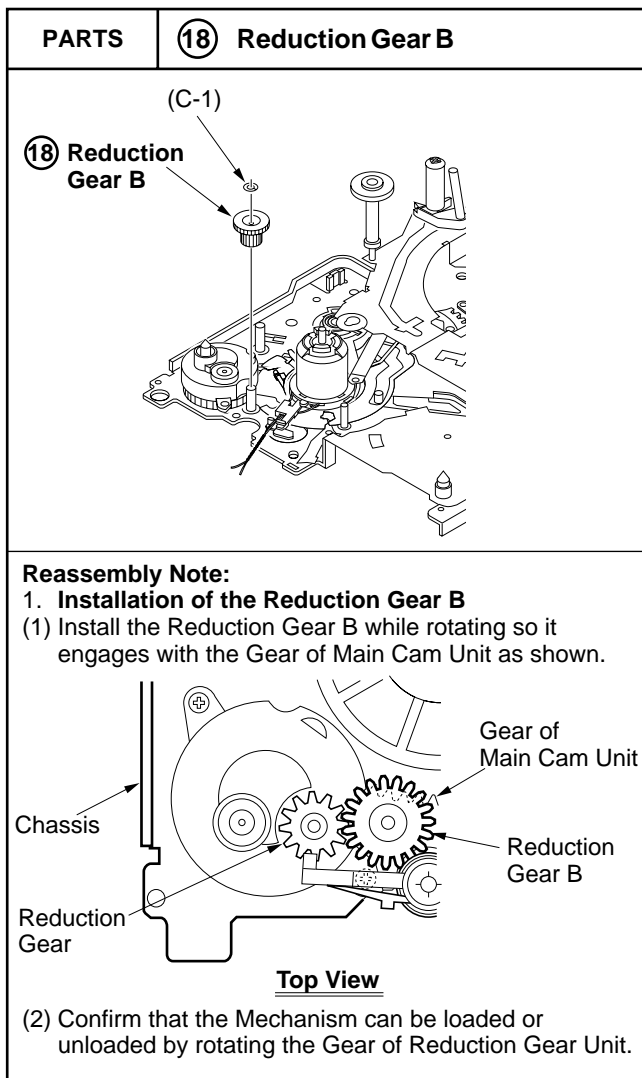


Fig. DM15

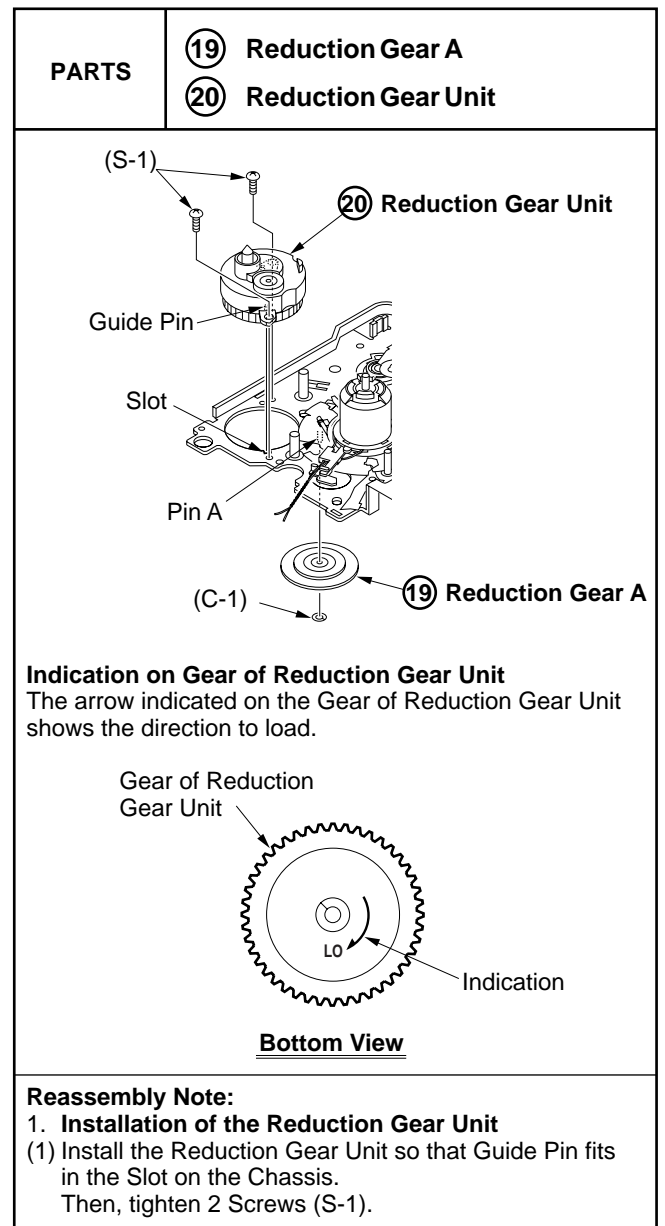


Fig. DM16

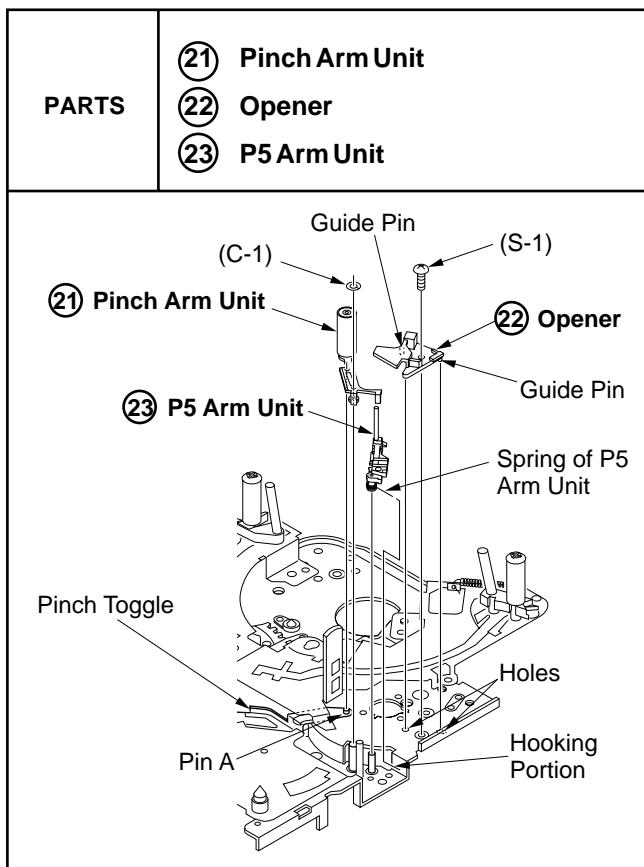
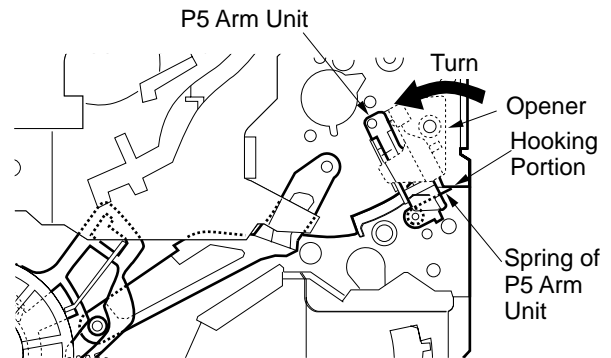


Fig. DM17-1

Reassembly Note:

1. Installation of the P5 Arm Unit and the Opener

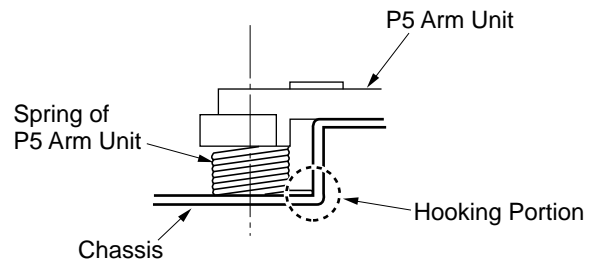
- (1) Before installing the P5 Arm Unit, put the Mechanism in the **Loading Position** (S and T Posts are located at the end of guide slots) as shown.
- (2) Install the P5 Arm Unit while hooking the Spring to Hooking Portion.
- (3) Turn the P5 Arm Unit as indicated by the arrow while lifting up the P5 Arm Unit slightly from the Chassis.



Loading Position

Top View

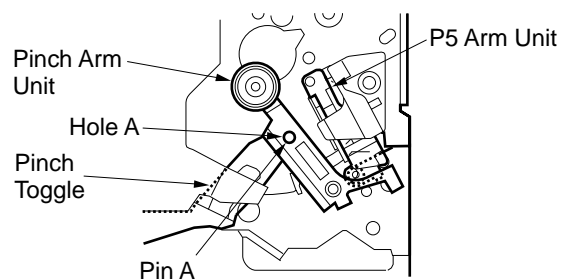
- (4) Install the Opener so that Guide Pins on the Opener fit in Holes on the Chassis. Then, tighten Screw (S-1).
- (5) Confirm that the P5 Arm Spring is hooked on the bottom of chassis.



Side View

2. Installation of the Pinch Arm Unit

- (1) Install the Pinch Arm Unit.
- (2) Fit Hole A on the Pinch Arm Unit over Pin A on the Pinch Toggle as shown.



Top View

- (3) Install the Cut Washer (C-1).

3. Adjustment of the P5 Arm Unit and the Pinch Arm Unit

- (1) After replacing, perform the "Tape Interchangeability Adjustment" procedures, pages 2-38 to 2-41.

Fig. DM17-2

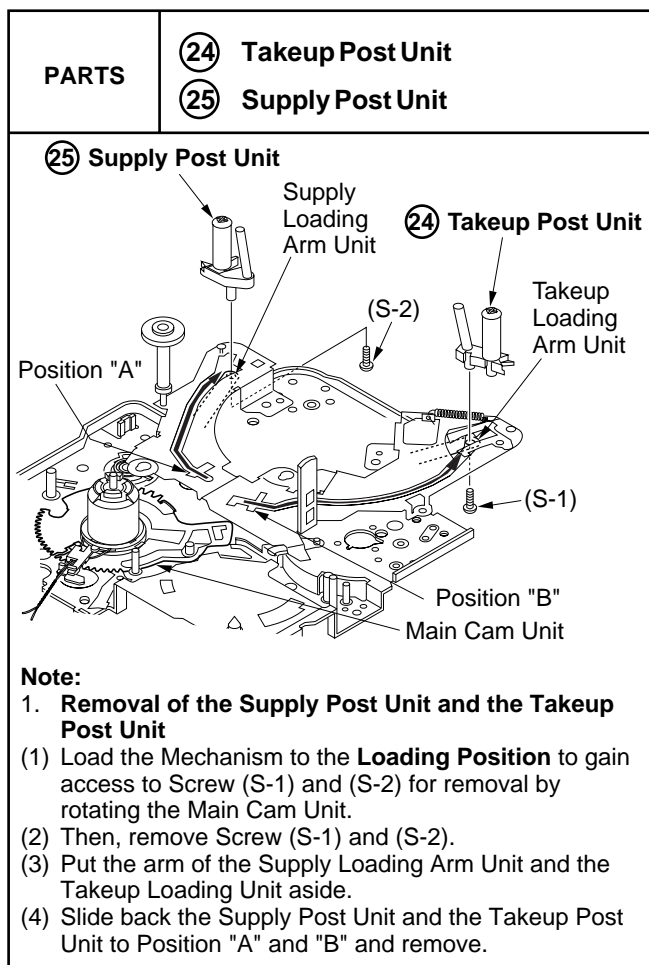
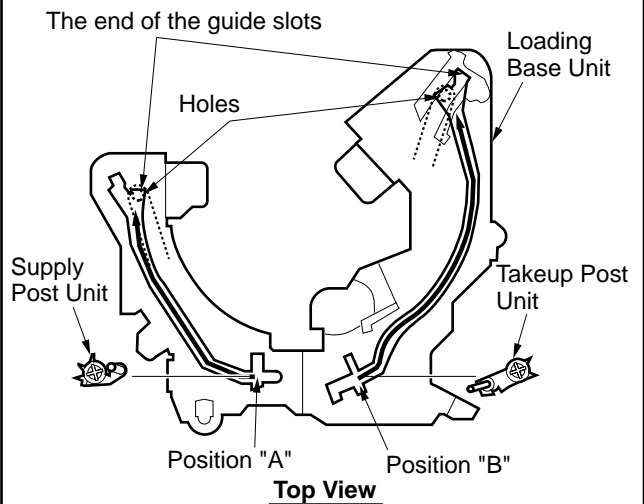


Fig. DM18-1

Reassembly Note:

1. Installation of the Supply Post Unit and the Takeup Post Unit

- (1) Confirm that the end of the arm (the threaded hole) of Supply Loading Arm Unit and the end of the arm (the threaded hole) of Takeup Loading Arm Unit are in the end of the guide slots.
- (2) Install the Supply Post Unit and the Takeup Post Unit into Position "A" and "B" while being careful of the direction of the Supply Post Unit and the Takeup Post Unit.
- (3) Slide the Supply Post Unit and the Takeup Post Unit to the end of guide slots as shown.



- (4) Align the Hole of the Supply Loading Arm Unit with the Threaded Hole of the Supply Post Unit. Do the Same with the Takeup Post Unit.
- (5) Tighten Screw (S-1) and (S-2).

Caution:

Be careful of the following when tightening Screw (S-1) and (S-2).

1. Be sure to tighten screws straight.
2. Do not over tighten screws.

2. Adjustment of the Supply Boat Unit and Takeup Boat Unit

- (1) After replacing, perform the "Tape Interchangeability Adjustment" procedures, pages 2-38 to 2-41.

Fig. DM18-2

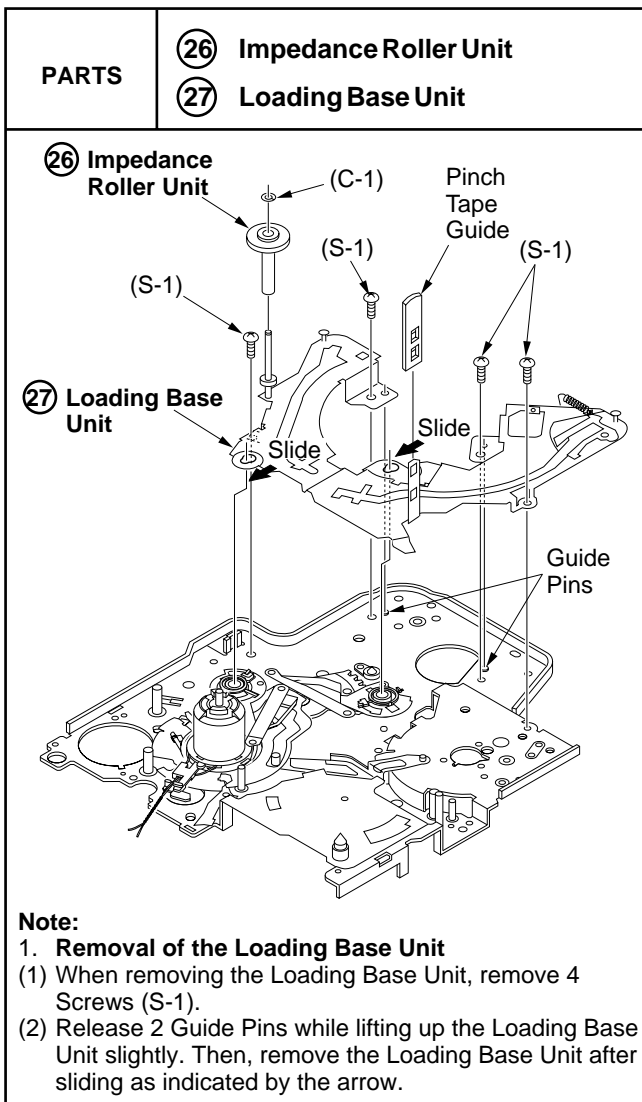


Fig. DM19-1

Reassembly Note:

1. Installation of the Loading Base Unit

- Before installing the Loading Base Unit, rotate the Main Cam Unit clockwise (to change the gear position from STOP position (Fig. DM20) to Standby position (Fig. DM19-2)) so that Holes A, B, C, and D are Through Holes with holes on the chassis.
- Confirm that Portion (a) of Supply Loading Arm Unit and (b) of Takeup Loading Arm Unit are in the position keeping off Thread Holes for 4 Screws (S-1) as shown.
- Install the Loading Base Unit while sliding.
- Tighten 4 Screws (S-1).

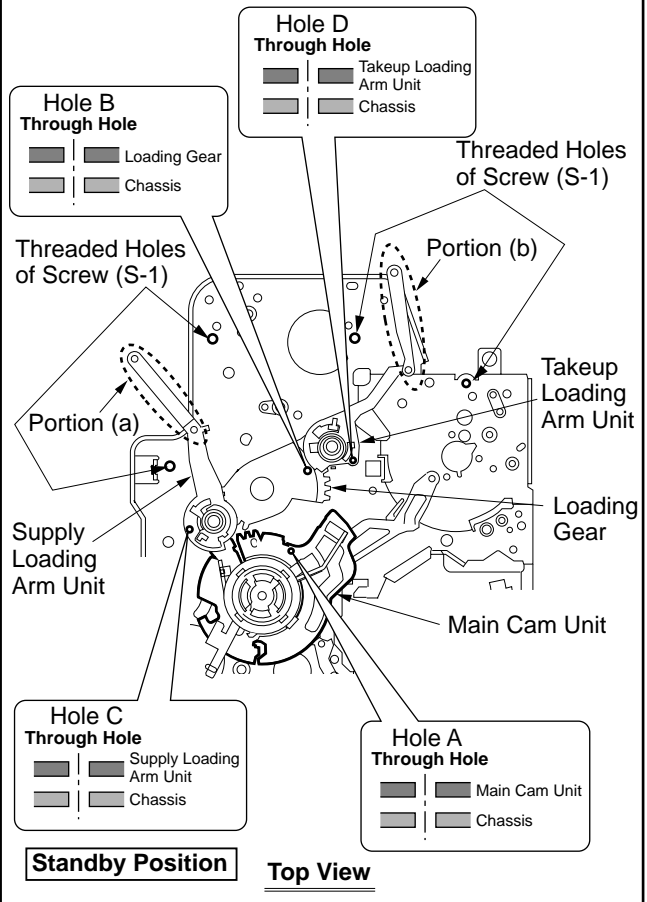


Fig. DM19-2

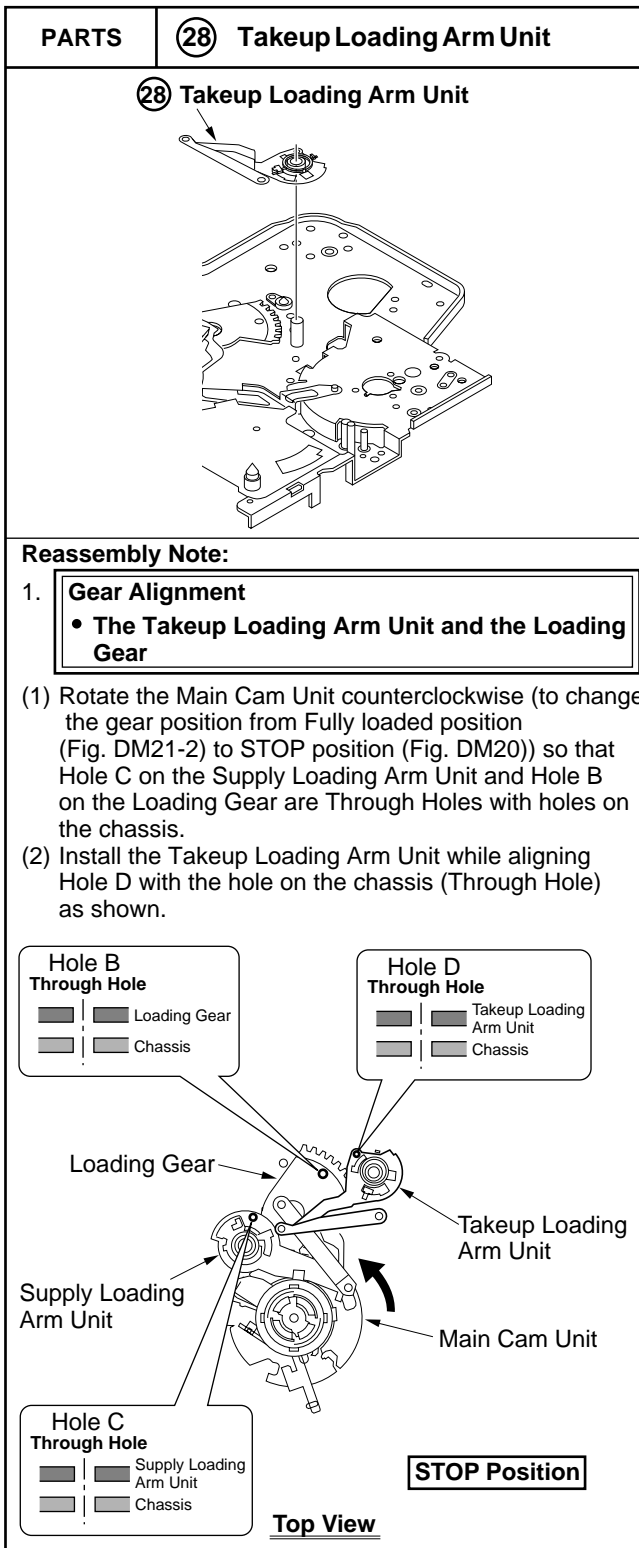


Fig. DM20

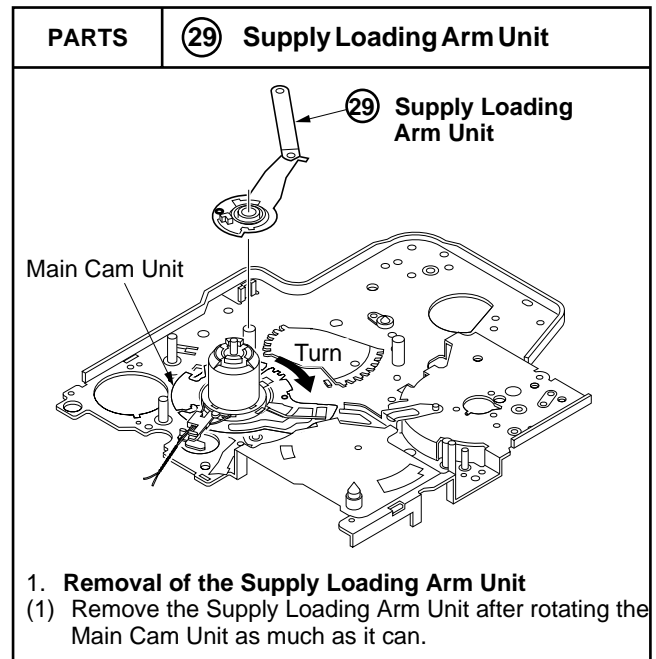


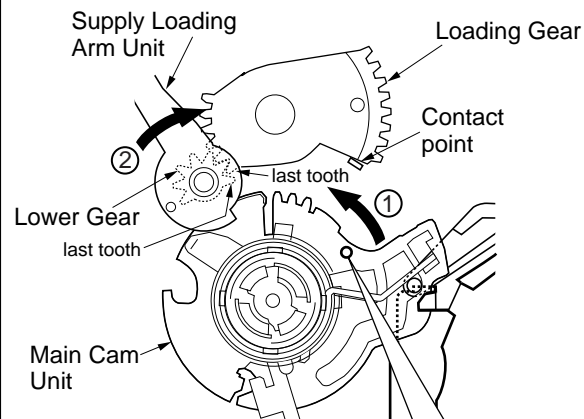
Fig. DM21-1

Reassembly Note:

1. Gear Alignments

- **The Supply Loading Arm Unit and the Loading Gear**
- **The Supply Loading Arm Unit and the Main Cam Unit**

- (1) Confirm that Hole A on the Main Cam Unit is a Through Hole with a hole on the chassis by rotating the Main Cam Unit clockwise as much as possible. Also, make sure the Loading Gear makes contact with contact point.
- (2) Set the Supply Loading Arm Unit so that the last tooth of its lower gear is just outside the last tooth of the Loading Gear as shown.
- (3) Turn the Main Cam Unit counterclockwise first ①, then turn Supply Loading Arm Unit clockwise slightly ② so that the last tooth on upper gear of Supply Loading Arm Unit is just outside tooth (a) of Main Cam Unit.



Fully Loaded (Play) Position

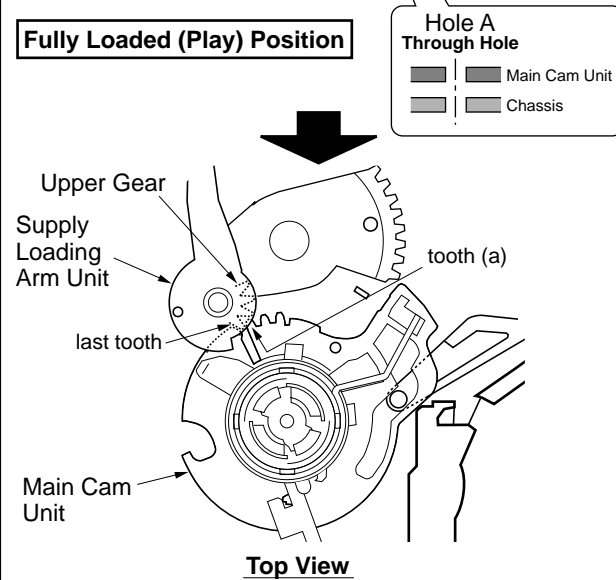


Fig. DM21-2

- (4) Confirm that Hole A, B, and C are Through Holes by rotating the Main Cam Unit.

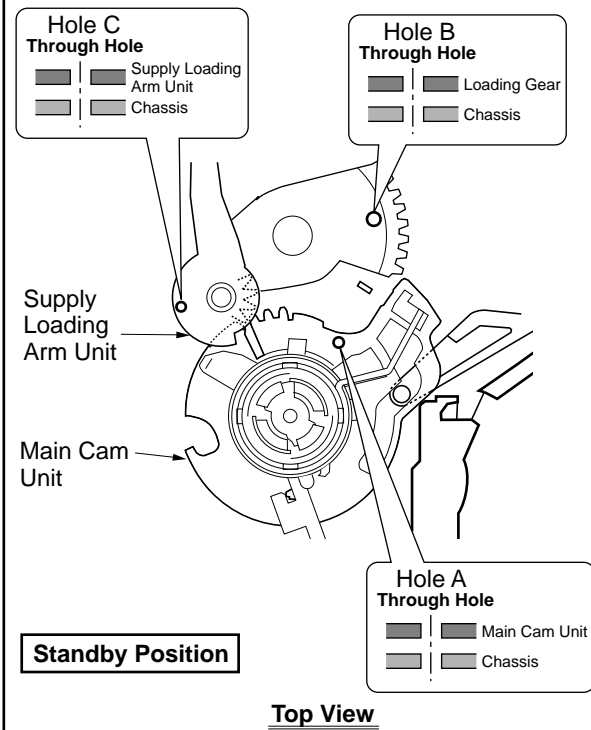


Fig. DM21-3

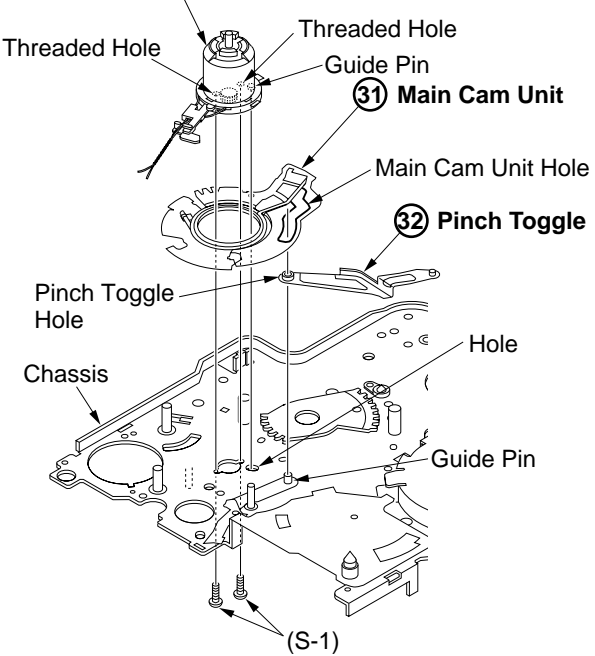
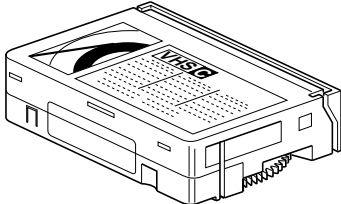
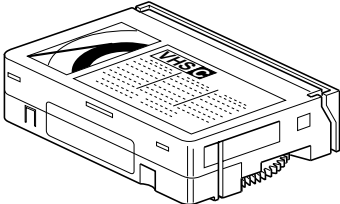
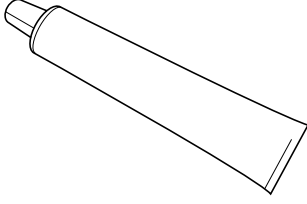
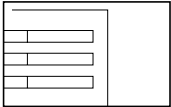
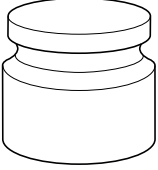

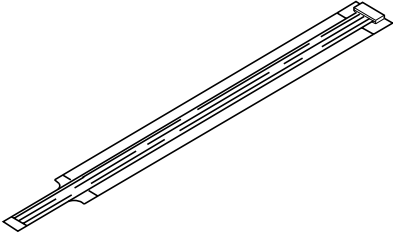
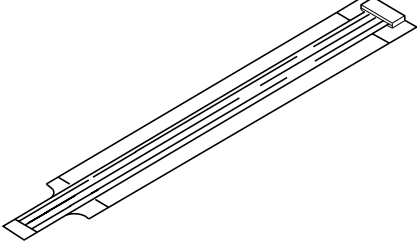
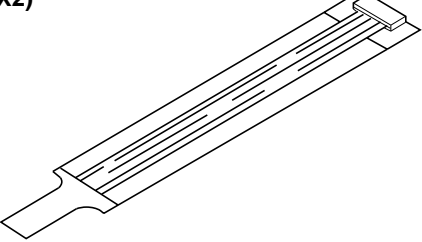
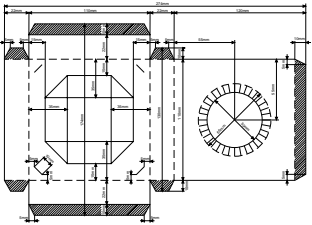
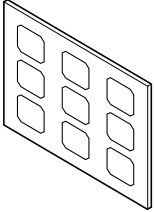
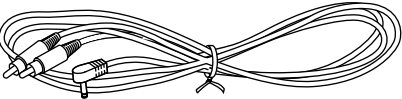
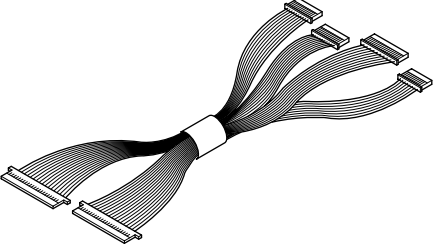
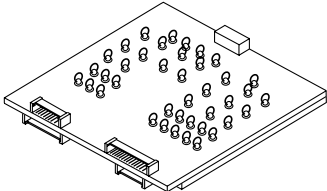
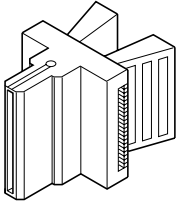
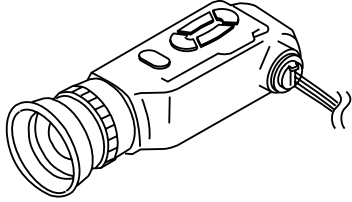
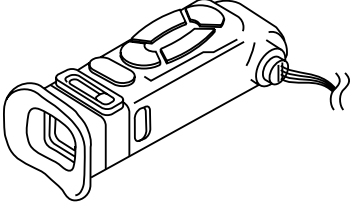
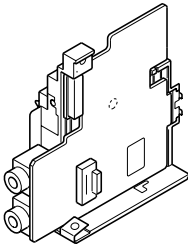
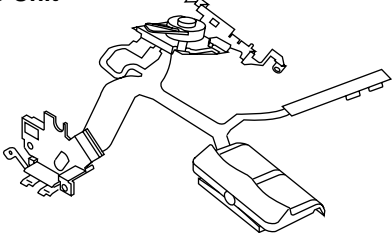
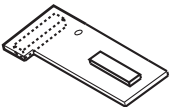
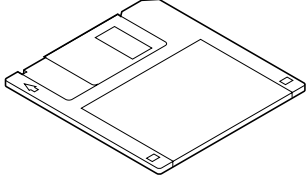
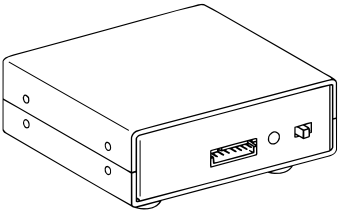
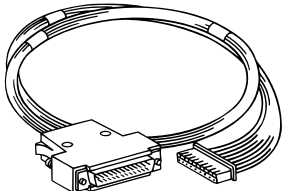
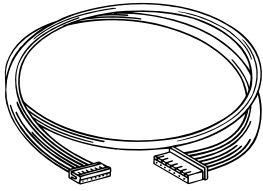
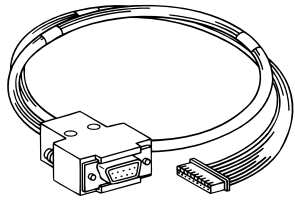
PARTS	<p>③① Loading Motor Unit</p> <p>③② Main Cam Unit</p> <p>③③ Pinch Toggle</p>
	<p>③① Loading Motor Unit</p>  <p>Threaded Hole</p> <p>Threaded Hole</p> <p>Guide Pin</p> <p>③② Main Cam Unit</p> <p>Main Cam Unit Hole</p> <p>③③ Pinch Toggle</p> <p>Pinch Toggle Hole</p> <p>Chassis</p> <p>Hole</p> <p>Guide Pin</p> <p>(S-1)</p>
	<p>Reassembly Note:</p> <p>1. Installation of the Pinch Toggle and the Main Cam Unit</p> <p>(1) Install the Pinch Toggle so that the Pinch Toggle Hole fit over the Guide Pin.</p> <p>(2) Install the Main Cam Unit so that Guide Pin fits in the Main Cam Unit Hole.</p> <p>2. Installation of the Loading Motor Unit</p> <p>(1) Install the Loading Motor Unit the Guide Pin fits in Hole on chassis.</p> <p>(2) Tighten 2 Screws (S-1). If the 2 Screws (S-1) can not reach Threaded Holes, push down on the upper side of the Loading Motor Unit to tighten 2 Screws (S-1).</p>

Fig. DM22

ADJUSTMENT PROCEDURES

Service Fixtures & Tools

VHS-C Alignment Tape VFMS0004H6C 	VHS-C Alignment Tape VFMW0001C 	Molytone Grease VFK1024 
Head Cleaning Stick VFK27 	Grease VFKS0081 	Lock Screw VHDW0125 
Extension Cable 12P VUVS0007 	Extension Cable 20P LSUA0020 	Extension Cable 26P (X2) LSUA0021 
A.W.B. Adjustment Fixture VFKW0066 	Color Chip Chart VFKW0116 	Audio Video Cable VJAW0032 
TP Board Kit		
TP Adjustment Cable 40P LSUP0005A 	TP Adjustment P.C.B. 40P VFKW0123B 	TP Clip 36P LSUP0005C 

<p>EVF Unit</p> <p>VYKW3146E (Model: A, B)</p>  <p>The part number of the monochrome EVF Unit for Model A, B is different from that of the monochrome EVF Unit (VYKW3146E) which is supplied as a representative service fixture.</p>	<p>Color EVF Unit</p> <p>VYKW3142E (Model: C)</p>  <p>The part number of the color EVF Unit for Model C is different from that of the color EVF Unit (VYKW3142E) which is supplied as a representative service fixture.</p>
<p>Battery Catcher Unit</p> <p>VEQW0296</p> 	<p>Side L FPC Unit</p> <p>VEQW0293</p> 
<p>Relay C.B.A.</p> <p>VEPW1640A1</p> 	<p>PC-EVR Adjustment Program</p>  <p>not supplied</p>
<p>CAAS Kit VFKW1000</p>	
<p>Interface Box VFKW1000A</p>  <p>25pin RS-232C Cable VFKW1000D</p> 	<p>Camera Connecting Cable VFKW1000B</p>  <p>9pin RS-232C Cable VFKW1000C</p> 

MECHANICAL ADJUSTMENT

CLEANING PROCEDURE FOR THE UPPER CYLINDER UNIT

1. While slowly turning the Upper Cylinder Unit counterclockwise by hand, gently rub the Video Heads with a Head Cleaning Stick (VFK27) moistened with Isopropyl Alcohol 91%.

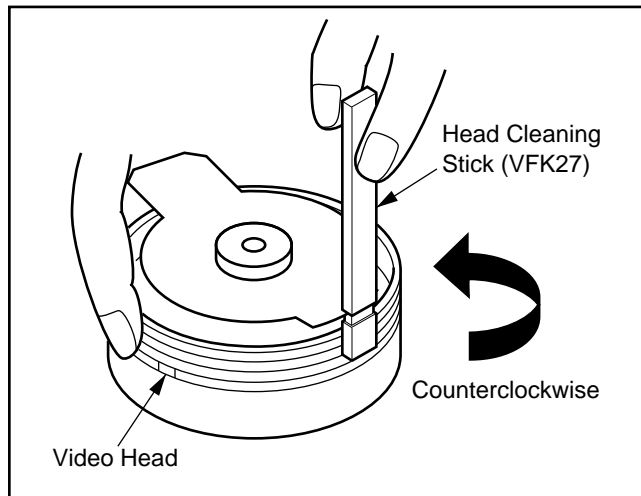


Fig. M1

Note:

- 1) Do not rub vertically or apply excess pressure to the Video Heads.
Do not turn the Upper Cylinder Unit clockwise while cleaning.
- 2) After cleaning, use a Dry Head Cleaning Stick (VFK27) to remove any Isopropyl Alcohol 91% remaining on the cylinder tape path. Otherwise, tape damage will occur.

TAPE INTERCHANGEABILITY ADJUSTMENT

Before perform these Adjustment/Confirmation procedures, be sure to complete following items.

1. Connect the TP Board Kit to S301 on the camcorder.
Refer to "How to use TP Board Kit" in "Service Notes," page 1-24.

It is possible to perform S Post, T Post, and A/C Head Unit adjustment with only the Cassette Cover removed.

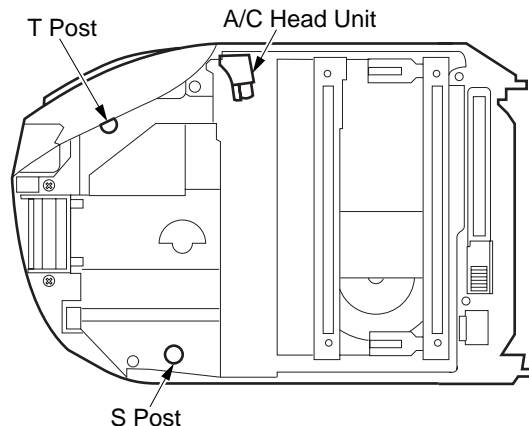


Fig. M2-1

2. Put the unit into the service mode "I. Tracking Fix" to defeat Auto Tracking. Refer to "Service Mode Specification" in "Service Notes," page 1-18.
3. Remove the Cassette Lid Cover from the Cassette Tape or the Alignment Tape.

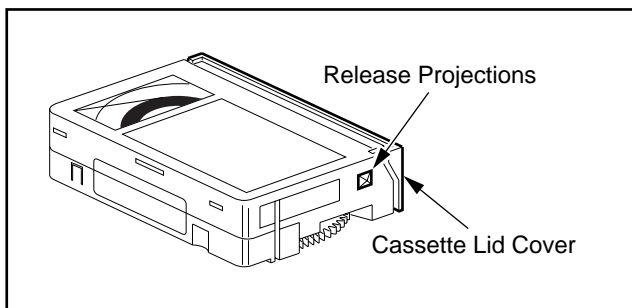


Fig. M2-2

Equipment Required:

Dual Trace Oscilloscope	
VHS-C Alignment Tape	(VFMS0004H6C)
VHS-C Alignment Tape	(VFMW0001C)
Screwdriver Set	(Purchase Locally)
TP Board Kit	
TP Adjustment Cable 40P	(LSUP0005A)
TP Adjustment P.C.B. 40P	(VFKW0123B)
TP Clip 36P	(LSUP0005C)

1. ENVELOPE OUTPUT ADJUSTMENT

The height of the S and T Posts replacement part is preset at the factory.

Purpose:

To achieve a satisfactory picture and secure precise tracking.

Symptom of Misadjustment:

If the envelope is output poorly, much noise will appear in the picture. Then the tracking will lose precision and the playback picture will be distorted by any slight variation of the tracking control circuit.

1. Put the unit into the service mode "I. Tracking Fix" to defeat Auto Tracking. Refer to "Service Mode Specification" in "Service Notes," page 1-18.
2. Connect the oscilloscope to Pin 30 (Envelope signal) on the TP Adjustment P.C.B. Use Pin 33 (Head Switch signal) as a trigger.
3. Play back the Alignment Tape (VFMS0004H6C).
4. Confirm that the RF envelope is flat enough. If not, with Flat Headed (–) Screwdriver, adjust S and T post height so that the envelope waveform becomes as flat as possible (No envelope drop). If the envelope drop appears on the left-half of the waveform, adjust S post height. If the envelope drop appears on the right-half of the waveform, adjust T post height.

CAUTION: Do not apply excessive pressure onto the S and T Posts when adjusting S and T post height.

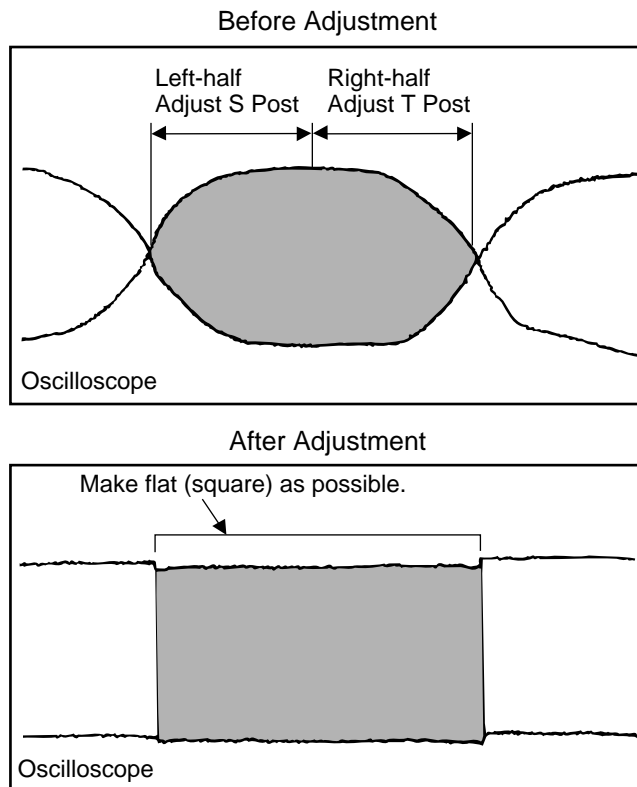


Fig. M3-1

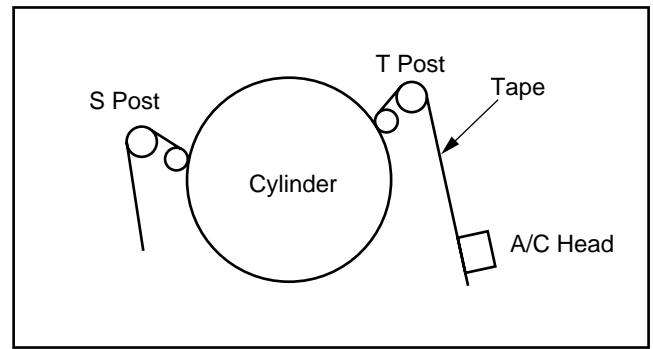


Fig. M3-2

Note:

It will be possible to confirm step 4) after performing the following steps.

- (1) Exit the "I. Tracking Fix" mode, then skip the "J. PG Shifter" mode to enter other modes (except these 2). Or, close the service mode.
 - (2) Press the Tracking Control Up or Down button on the camcorder. Make sure that the envelope waveform remains flat. If not, readjust S and/or T post heights.
5. After adjustment, confirm that the tape travels without curing at S and T posts. If curing is apparent, readjust the height of posts.

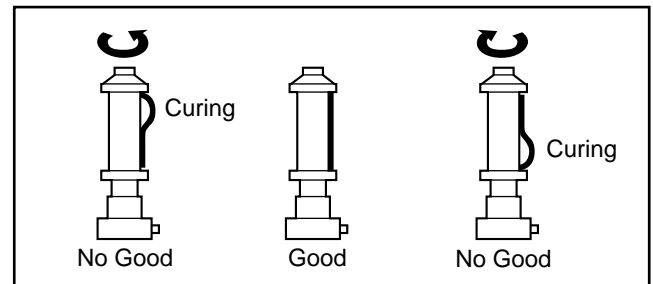


Fig. M3-3

2. A/C HEAD HEIGHT ADJUSTMENT

The height of the A/C Head replacement part is preset at the factory.

Purpose:

To be sure the tape runs properly along the Control Head.

Symptom of Misadjustment:

If the control signal is not properly picked up, Servo Operation can not be achieved.

1. Connect the oscilloscope to Pin 25 (PB Control signal) on the TP Adjustment P.C.B.
2. Play back the Alignment Tape (VFMW0001C)
3. Confirm that the Sub Control Signal is 500 ± 200 mV. If not, **slightly and equally** adjust Screw A, Screw B, and Screw C on the A/C Head Unit to achieve the sub control signal level of 500 ± 200 mV. (Sub Control Signal level will decrease when rotating screws clockwise, and increase when rotating screws counterclockwise.)

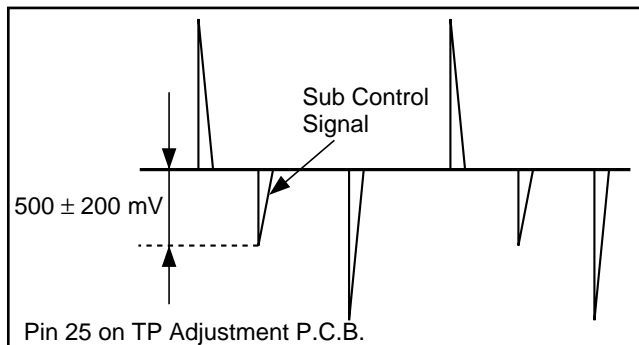


Fig. M4-1

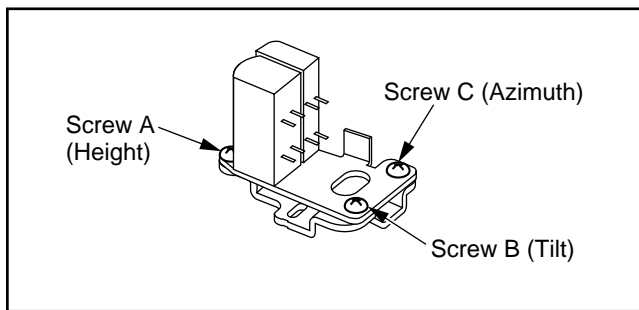


Fig. M4-2

3. A/C HEAD AZIMUTH ADJUSTMENT

Purpose:

To adjust the position and height of the A/C Head so that it meets the tape tracks properly.

Symptom of Misadjustment:

If the position of the A/C Head is not properly adjusted, the Audio S/N Ratio will be poor.

1. Connect the Audio/Video Cable on the camcorder.
2. Connect the oscilloscope to audio output jack.
3. Playback the Alignment Tape (VFMS0004H6C).
4. Adjust Screw C (Azimuth) on the A/C Head Unit so that the output level is at maximum.

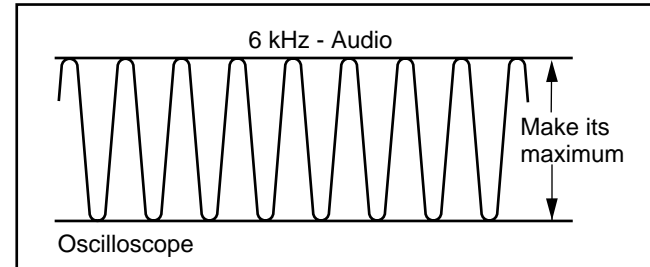


Fig. M5

5. Confirm and readjust the A/C Head height.
6. Confirm and readjust Screw C (Azimuth) on the A/C head so that the output audio becomes is maximum.

4. A/C HEAD HORIZONTAL POSITION ADJUSTMENT

Purpose:

To adjust the Horizontal Position of the A/C Head.

Symptom of Misadjustment:

If the Horizontal Position of the A/C Head is not properly adjusted, maximum envelope can not be obtained at the Neutral Position of the Tracking Control Circuit.

1. Put the unit into the service mode "I. Tracking Fix" to defeat Auto Tracking. Refer to "Service Mode Specification" in "Service Notes," page 1-18.
2. Connect the oscilloscope to Pin 30 (Envelope signal) on the TP Adjustment P.C.B. Use Pin 33 (Head Switch signal) as a trigger.
3. Play back the Alignment Tape (VFMS0004H6C).
4. Set the Screwdriver into the Hole (A) as shown.

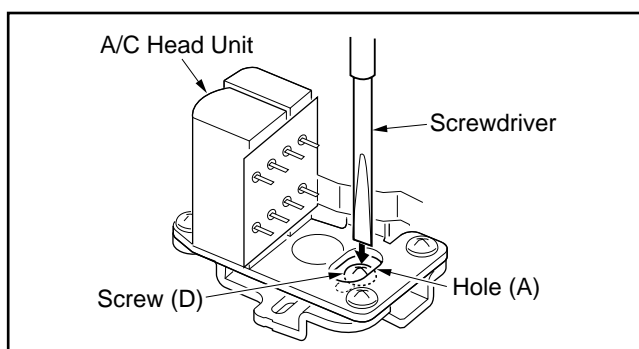


Fig. M6-1

5. Slowly move the A/C Head Unit to the direction "A" or "B" as shown so that the envelope is at maximum.

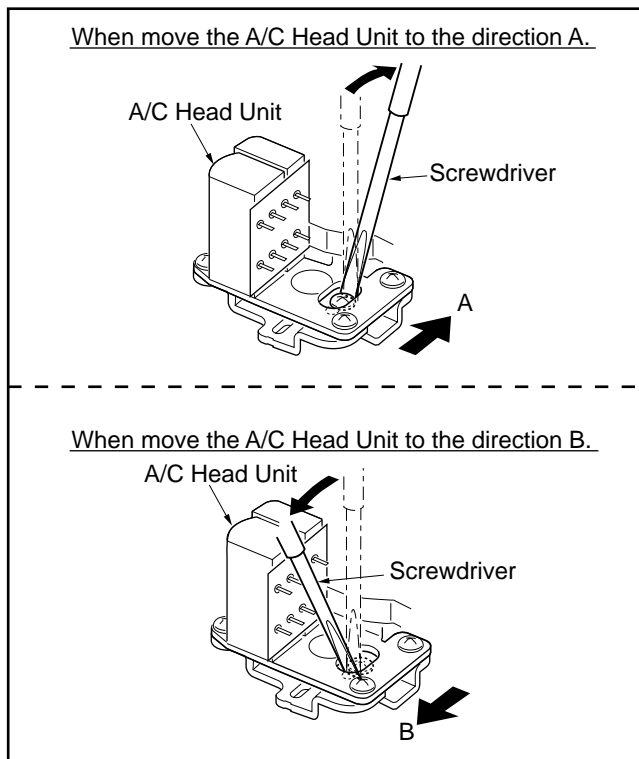


Fig. M6-2

6. To find the center of the maximum period of the envelope, move the A/C Head Unit to confirm the limits on either side of the maximum period.

Note:

It will be possible to confirm step 6) after performing the following steps.

- (1) Exit the "I. Tracking Fix" mode, then skip the "J. PG Shifter" mode to enter other modes (except these 2). Or, close the service mode.
- (2) Press the Tracking Control Up Button on the camcorder several times (count the number of times pressed) until the maximum envelope is reduced to 1/2.
- (3) Press the Tracking Control Down Button on the camcorder several times (count the number of times pressed) until the maximum envelope is reduced to 1/2.
- (4) If the number of pressing is not the same, readjust A/C Head horizontal position.

5. CONFIRMATION OF ENVELOPE OUTPUT

Purpose:

To achieve a satisfactory picture and secure precise tracking.

Symptom of Misadjustment:

If the envelope is output poorly, much noise will appear in the picture. Then the tracking will lose precision and the playback picture will be distorted by any slight variation of the tracking control circuit.

1. Connect the oscilloscope to Pin 30 (Envelope signal) on the TP Adjustment P.C.B. Use Pin 33 (Head Switch signal) as a trigger.
2. Play back the Alignment Tape (VFMS0004H6C).
3. Confirm that the envelope waveform is as flat as possible ($V1/V(\max) \geq 0.7$).

If adjustment is required, adjust S Post and/or T Post with "-" Screwdriver. Refer to "1. Envelope Output Adjustment."

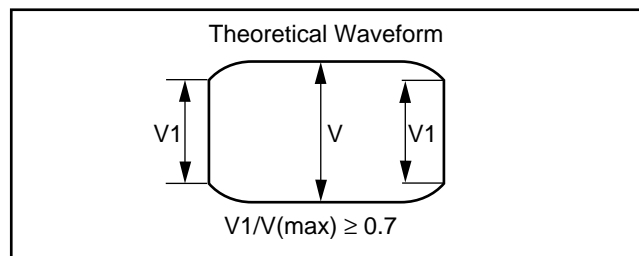


Fig. M7

ELECTRICAL ADJUSTMENT

INTRODUCTION

For Electrical adjustments, Compact Camcorder are adjusted by using PC-EVR Adjustment Software and mechanical controls (Variable Resistor).

For adjustment item (section) for the model you are servicing, please refer to the following table.

ADJUSTMENT ITEM (Section)	ADJUSTMENT SYTEM	MODEL		
		PV-L759	PV-L779	PV-L859
Electrical Adjustment for CAMERA Section	Frequency Adjustment: VR Adjustment	○	○	○
	w/o Frequency Adjustment: PC-EVR Adjustment	○	○	○
Electrical Adjustment for VCR Section	PC-EVR Adjustment	○	○	○
Electrical Adjustment for COLOR EVF Section	PC-EVR Adjustment	—	—	○
Electrical Adjustment for MONOCHROME EVF Section	VR Adjustment	○	○	—
Electrical Adjustment for LCD MONITOR Section	PC-EVR Adjustment	○	○	○

TEST EQUIPMENT

To do all of the Electrical Adjustment, the following equipments are required.

1. Dual-Trace Oscilloscope
Voltage Range : 0.001 to 50V/Div.
Frequency Range : DC to 50MHz
Probes : 10:1, 1:1
2. DVM (Digital Volt Meter)
3. Frequency Counter
4. Color TV Monitor
5. VHS-C Alignment Tape (VFMS0004H6C)

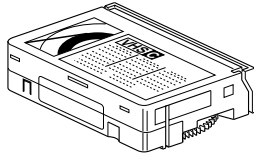


Fig.E1-1

6. Vectorscope
7. Plastic Tip Driver
8. Audio Video Cable (VJAW0032)

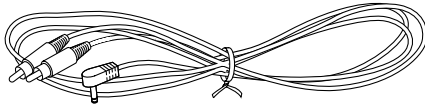


Fig.E1-2

9. Power Supply for Interface Box.
10. Side L FPC Unit (VEQW0293)

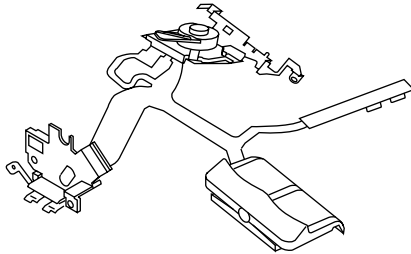
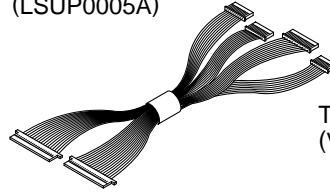


Fig.E1-3

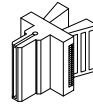
11. EVF Unit (VYKW3146E : Model A,B)
12. Color EVF Unit (VYKW3142E : Model C)
13. Personal Computer
PC: IBM PC/AT or compatible
OS: MS-DOS or MS-Windows
CPU: 486 or higher
Drive: 3.5 inch 1.44MB floppy disk drive
Port: D-Sub-9-pin Serial or D-Sub-25-pin Serial
Monitor: VGA Color
14. PC-EVR Adjustment Program

15. CAAS Kit (VFKW1000)
Interface Box (VFKW1000A)
Camera Connecting Cable (VFKW1000B)
9 Pin RS-232C Cable (VFKW1000C)
25 Pin RS-232C Cable (VFKW1000D)

16. TP Board Kit
TP Adjustment Cable 40P (LSUP0005A)



TP Clip 36P (LSUP0005C)



TP Adjustment PCB 40P (VFKW0123B)

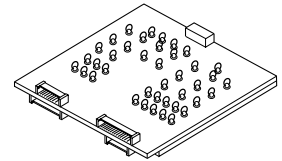


Fig.E1-4

(adjustment equipment with using Infinity Lens)

17. Lighting (Light Box (VFK1164LBX1) is recommended)
18. Infinity Lens (VFK1164TCM02)
(with Focus Chart)
19. 49mm Ring (VFK1164TAR49)
20. Gray Scale Chart (VFK1164TFGS2)
21. Color Bar Chart (VFK1164TFCB2)
22. White Chart (VFK1164TFWC2)
23. Color Conversion Filter (VFK1164TFCT2)

(adjustment equipment without using Infinity Lens)

24. Lighting (Halogen Lamp (2000 lux))
25. Reflection Chart
Reflection Chart Set (VFKS003-N)
(Reflection Chart Set consists of Gray Scale Chart (VFKS003A), Color Bar Chart (VFKS003B), Registration Chart (VFKS003C), and Resolution Chart (VFKS003D))
Gray Scale Chart (VFKS003A)
Color Bar Chart (VFKS003B)
Registration Chart (VFKS003C)
Resolution Chart (VFKS003D)
Color Chip Chart (VFKW0116)
26. Color Temperature Conversion Filter 80A or equivalent
Color Temperature Conversion Filter
27. Color Compensating Filter CC05M
28. A.W.B. Adjustment Fixture (VFKW0066)

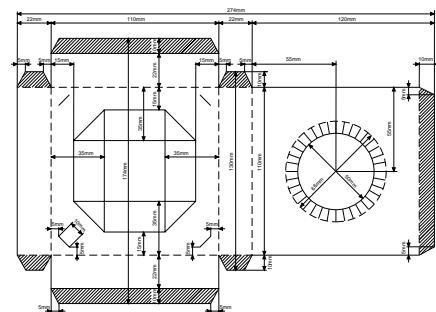


Fig.E1-5

PREPARATION

1. Assemble the TP Board Kit as shown in Fig.E2-1.

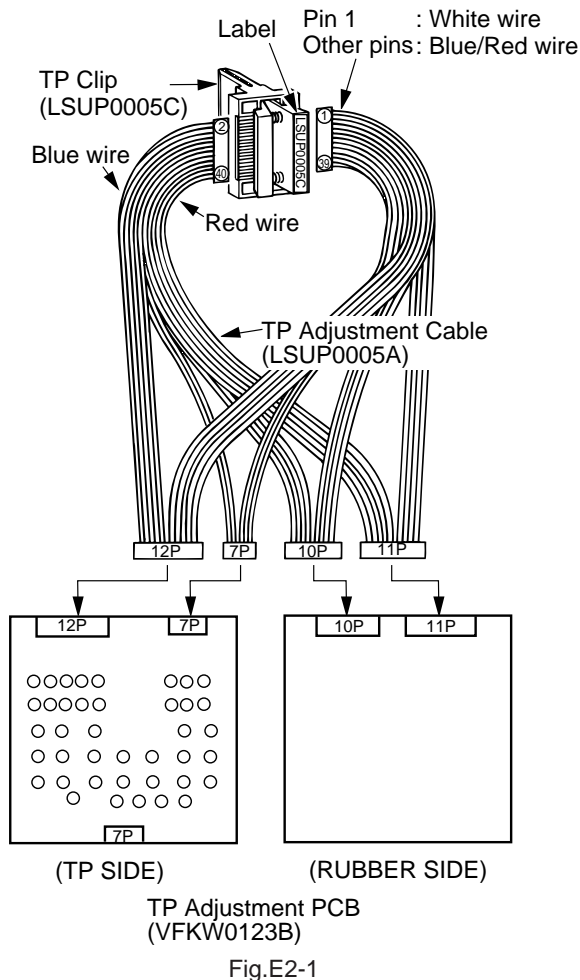


Fig.E2-1

Note:

When inserting the TP Adjustment Cable to the TP Clip, be sure to insert the cable with white wire (1pin) to the label side of the TP Clip as shown in Fig.E2-1.

2. Connect the Interface Box to the TP Board Kit with Camera Connecting cable (VFKW1000B).
3. Connect the Interface Box to the Personal Computer with RS-232C cable (VFKW1000C or VFKW1000D).

<Computer Assisted Adjustment System>

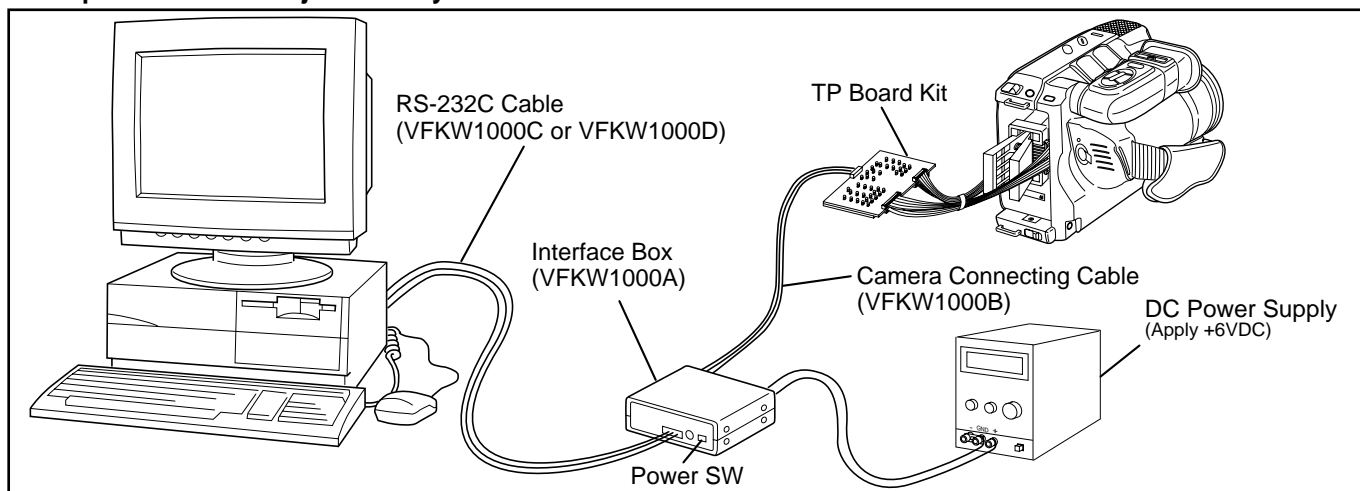


Fig.E2-3

4. Connect the TP Board Kit to S301 on the camcorder as shown in Fig.E2-2. Refer to "How to use TP Board Kit" in "Service Notes," page 1-24.

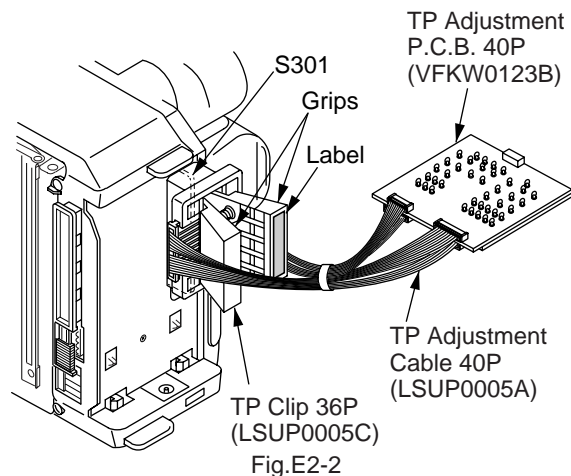


Fig.E2-2

Note:

When inserting the TP Clip to S301 on the camcorder, pinch the grips and be sure that the label is set to the right side as shown in Fig.E2-2.

5. Connect the AC Adaptor and camcorder, and apply DC +6V to the Interface Box.
6. Power on the camcorder.

Note:

In case that the camcorder is in DEMO mode, release DEMO mode as follows:

Power off the camcorder first. Then, disconnect the TP Board Kit, and power on the camcorder. Then, press the STOP button over 5 seconds.

CAUTION:

1. **Do not connect or disconnect any cables while the camcorder is powered on.**
2. **Before using the TP Board Kit, be sure to clean S301 pattern with alcohol and confirm that there is no dust in the TP Clip.**
3. **To achieve the best adjustment results, warm up the camcorder for approx. 30 minutes before adjustment.**
4. **When removing the TP Clip from S301 on the camcorder, be sure to pinch the grips.**

7. Set up the camcorder for adjustment as follows:

Method 1 (with using Infinity Lens)

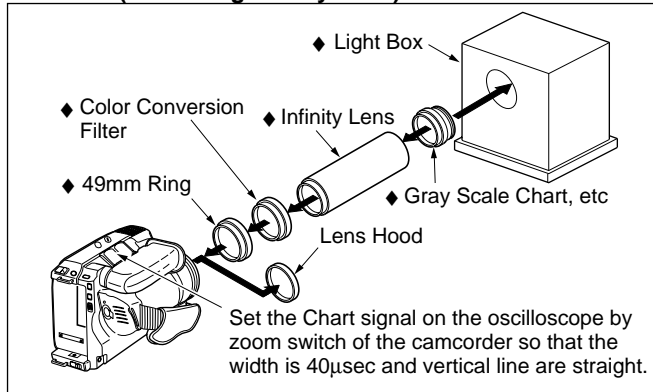


Fig.E2-4

Method 2 (without using Infinity Lens)

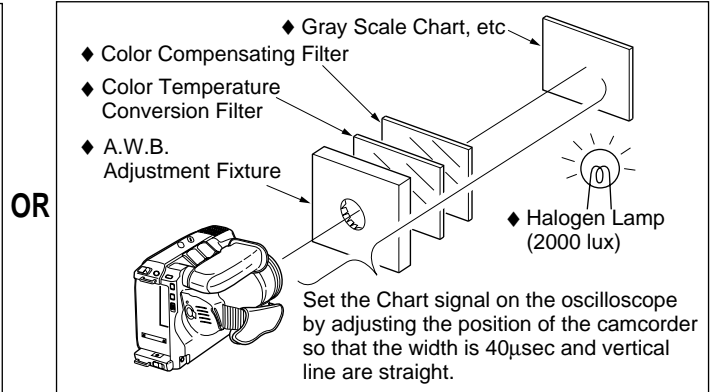


Fig.E2-5

For necessary equipments marked ♦ in Fig.E2-4 and E2-5, refer to the following table.

Adjustment Item		Necessary equipment											
		Method 1						Method 2					
		Light Box	Infinity Lens / 49mm Ring	Focus Chart	Gray Scale Chart	Color Bar Chart	White Chart	Color Conversion Filter	Halogen Lamp	Any object (High contrast)	Gray Scale Chart	Color Bar Chart	Color Chip Chart
Camera Section	Frequency Adjustment	※											
	VCO Adjustment												
	Burst/Sync Level Adjustment												
	Hall Amp Adjustment												
	Auto Focus Adjustment (Automatic Adjustment)												
	Gamma Adjustment												
	A/D Input Adjustment												
	Iris PWM Adjustment												
	Pedestal Level Adjustment												
	YH Level Adjustment												
	Auto white balance Adjustment												
	1 Indoor Preset Adjustment												
	2 Indoor Input Adjustment												
	3 Outdoor Preset Adjustment												
	4 Outdoor Input Adjustment												
VCR Section	5 Color Phase & R-Y, B-Y Gain Adjustment (Indoor Mode)												
	6 Color Phase & R-Y, B-Y Gain Adjustment (Outdoor Mode)												
	Playback Video Adjustment												
	Sync Tip Frequency Adjustment												
	Deviation Adjustment												
	Rec Level Adjustment												
	Comb Filter Gain Adjustment												
Color EVF Section	YNR Adjustment												
	Head Switching Position Adjustment												
	VCO Adjustment												
	EVF Pedestal/Contrast Adjustment												
	RB Output DC Level Adjustment												
	RB Sub Pedestal Adjustment												
	RB Sub Contrast Adjustment												
	R Gain Adjustment												
Monochrome EVF Section	B Gain Adjustment												
	EVF White Balance Adjustment												
	Vertical Size Adjustment	※											
	Centering Adjustment	※											
	Brightness Adjustment	※											
LCD Monitor Section	Focus Adjustment	※											
	PLL Adjustment												
	Pedestal Level Adjustment												
	Contrast Adjustment												
	RB Sub Pedestal Level Adjustment												
	Color Gain Adjustment												
	VCOM Level Adjustment												
	White Balance Adjustment												

Note 1: Auto Focus adjustment (Automatic adjustment) is available for only Method 1.

EVR ADJUSTMENT SET UP THE MENU MODE

1. Turn on the Personal Computer power SW.
Windows 95 will be set up automatically.
2. Restart it in MS-DOS mode.
3. Change the current directory to the one including the adjustment program.
 - 1) Input "cd " as shown in Fig.E3-1, and then press "ENTER" key.

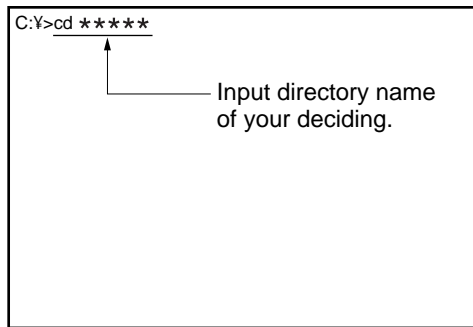


Fig.E3-1

- 2) When MS-DOS is Japanese mode, Input "us," and then press "ENTER" key.

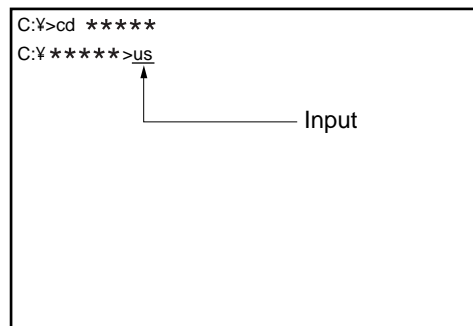


Fig.E3-2

- 3) US mode is on. Input "kc99" and press "ENTER" key.
Select Model Number Menu will be displayed.

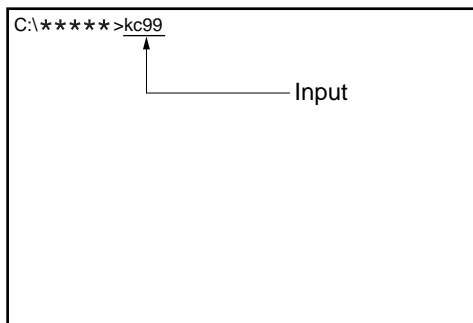


Fig. E3-3

4. Select the model number which will be serviced, and then press "Enter" key. The starting display will be displayed.
5. Perform some set up items according to menu.

HOW TO USE MAIN MENU

Main Menu

Select a Sub Menu to check, adjust the unit etc. by pressing (UP/DOWN) Key in Main Menu. Then, press "ENTER" Key. The Sub Menu will be displayed.

Note:

Menu 5 through 8 are needed for adjustment.

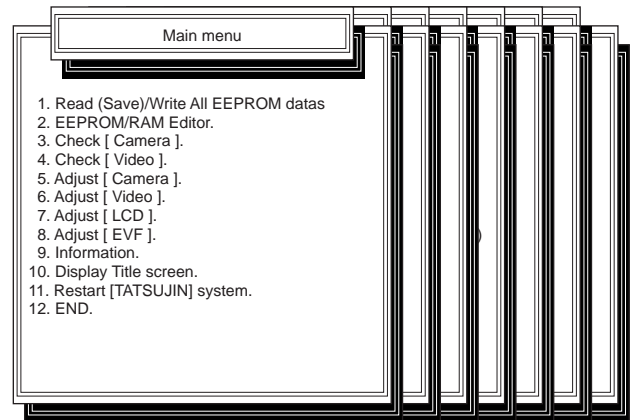


Fig. E4-1

With using key, you can also see sub menu in order.

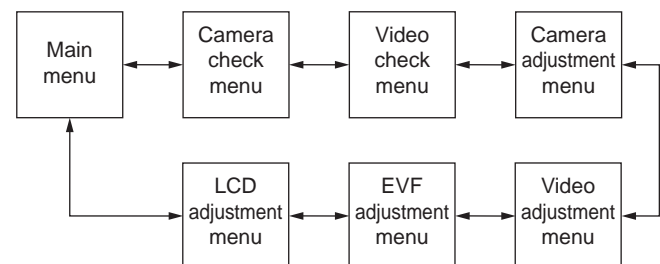


Fig. E4-2

EEPROM DATA

There is a EEPROM in this unit.

EEPROM

C.B.A.	EEPROM IC Ref. No.
Main C.B.A.	IC305

How to save the EEPROM data

Be sure to save EEPROM data before service and adjustment in order to make sure to avoid an accidental data loss as follows.

1. Select "1. Read (Save)/Write All EEPROM datas." in Main menu, and then press "Enter" key.
2. Select "1. Save all data of EEPROM" in Read (Save)/Write All EEPROM datas menu, and then press "Enter" key.
3. Input the File name, and then press "Enter" key. The data of EEPROM (IC305) will be stored to the PC.

How to rewrite the saved data to EEPROM

When it becomes impossible to adjust during service and adjustment, rewrite the saved data which stored in "How to save the EEPROM data" to EEPROM as follows. And readjust.

1. Select "1. Read (Save)/Write All EEPROM datas." in Main menu, and then press "Enter" key.
2. Select "2. Data write using stored file" in Read (Save)/Write All EEPROM datas menu, and then press "Enter" key.
3. Input the saved file name, and then press "Enter" key.
4. The data will be written in EEPROM (IC305).

How to initialize the EEPROM data

In case that the EEPROM IC (IC305) is replaced, be sure to write the Initial data to EEPROM IC.

1. Select "1. Read (Save)/Write All EEPROM datas." in Main menu, and then press "Enter" key.
2. Select "3. Data write with initial data." in Read (Save)/Write All EEPROM datas menu, and then press "Enter" key. And press "Enter" key once again.

When replacing the EEPROM

In case that the EEPROM (IC305) is replaced, be sure to write the data to EEPROM (IC305) on Main C.B.A. as follows.

1. Select "1. Read (Save)/Write All EEPROM datas." in Main menu, and then press "Enter" key.
3. Select "2. Data write using stored file." in Read (Save)/Write All EEPROM datas menu, and then press "Enter" key. Input the saved file name, and then press "Enter" key.
OR;
Select "3. Data write with initial data," and then press "Enter" key. And press "Enter" key once again.

Note:

The adjusted data has been written to EEPROM after each adjustments.

VR ADJUSTMENT CAMERA SECTION

Frequency Adjustment

Purpose:

To set the chroma subcarrier.

Symptom of Misadjustment:

The picture will be no color. (The burst shifts)

Specifications:

14.31818MHz +/- 80Hz

Adjustment Procedure:

- 1) Remove the Side Case (L) Unit. Refer to "Disassembly/Assembly Procedures of Cabinet", page 2-2. Connect the Side L FPC unit to the camcorder as shown in Fig.E5-1.
- 2) Connect the Frequency counter to TP601 of Main C.B.A.
- 3) Adjust C610 on the Main C.B.A. so that the frequency becomes 14.31818MHz +/- 80Hz.

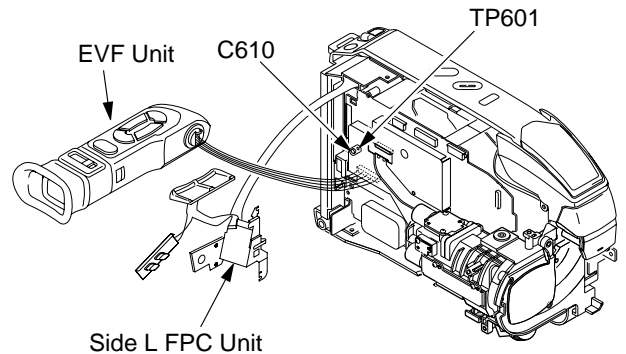


Fig.E5-1

MONOCHROME EVF SECTION

Note: Camcorder need NOT to be powered off and on after each adjustment procedure.

Preparation

1. Before adjusting the Monochrome EVF, Camera section and VCR section adjustments must be completely adjusted.
2. Remove the EVF Case B Unit to gain access to VRs on the EVF C.B.A. (Refer to "Disassembly/Assembly Procedures of Cabinet", page 2-8.)

Vertical Size Adjustment

Purpose:

To set the standard vertical size on the EVF picture.

Symptom of Misadjustment:

The vertical EVF picture size will be abnormal.

Test Point : -----

Adjustment : VR901 (EVF C.B.A.)

Specification : Best Vertical size

Input : Gray Scale Chart

Mode : SP REC

Equipment : Viewfinder

Adjustment Procedure:

1. Aim the camcorder at the gray scale chart.
2. Adjust the VERTICAL SIZE CONTROL (VR901) so that the vertical picture size becomes correct.

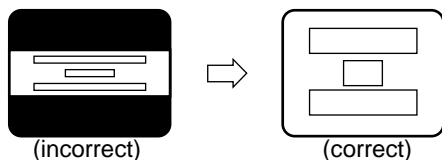


Fig. E5-2

Centering Adjustment

Purpose:

To set the optimum picture position on the EVF picture.

Symptom of Misadjustment:

The EVF picture will be shifted.

Test Point : -----

Adjustment : Deflection Yoke Centering Magnet

Specification : The picture position becomes centered on the EVF picture

INPUT : Gray Scale Chart

Mode : SP REC

Equipment : Viewfinder

Adjustment Procedure:

1. Aim the camcorder at the gray scale chart.
2. Adjust the Deflection Yoke Centering Magnet by turning them so that the picture is centered in the Viewfinder.

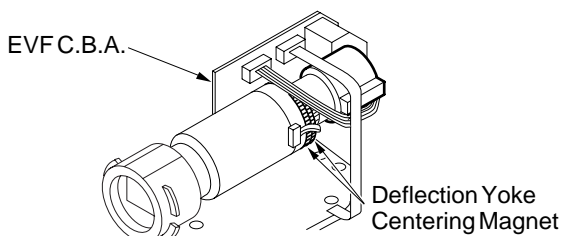


Fig. E5-3

Brightness Adjustment

Purpose:

To set the optimum EVF brightness level.

Symptom of Misadjustment:

The EVF picture will be too white or black.

Test Point : -----

Adjustment : VR906 (EVF C.B.A.)

Specification : Natural Gradation

INPUT : Color Bar Chart

Mode : SP REC

Equipment : Viewfinder

Adjustment Procedure:

1. Aim the camcorder at the color bar chart.
2. Adjust the BRIGHTNESS CONTROL (VR906) so that the brightness in the Viewfinder becomes natural gradation.

Focus Adjustment

Purpose:

To set the optimum focus on the EVF picture.

Symptom of Misadjustment:

The EVF picture will be out of focus.

Test Point : -----

Adjustment : VR903 (EVF C.B.A.)

Specification : Optimum focus

INPUT : Gray Scale Chart

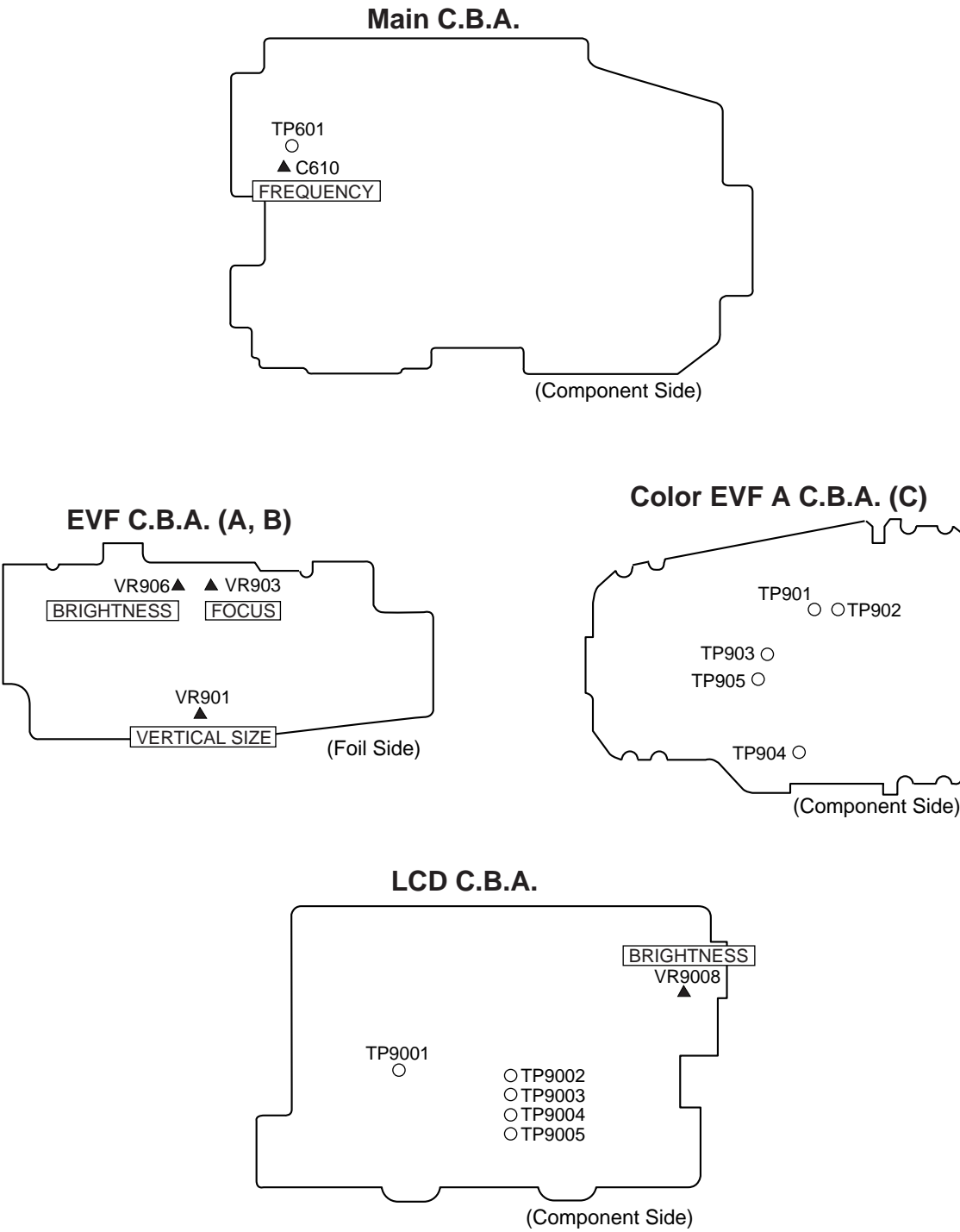
Mode : SP REC

Equipment : Viewfinder

Adjustment Procedure:

1. Aim the camcorder at the gray scale chart.
2. Adjust the FOCUS CONTROL (VR903) to optimum focus in the Viewfinder.

TEST POINTS AND CONTROL LOCATION



Test Point Information
○ Test Point with no Test Pin.

SCHEMATIC DIAGRAMS

SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES

1. Important safety notice

- Components identified by the sign \triangle have special characteristics important for safety. When replacing any of these components, use only the specified parts.
2. Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since this drawing was prepared.
3. Use only original replacement parts:
To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.
4. Parts different in shape or size may be used.
However, only interchangeable parts will be supplied as service replacement parts.
5. Test point information
 \bullet :Test point with a no test pin.

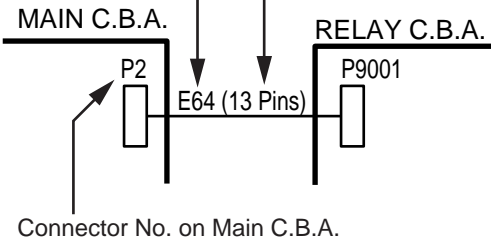
Schematic Diagram Notes

1. Indication for Zener Voltage of Zener Diodes
The Zener Voltage of Zener Diodes are indicated as such on Schematic Diagrams.
- Example:
(6.2V).....Zener Voltage
2. How to identify Connectors
Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to, in other words, its counter part.
Use the interconnection schematic diagram to find the connection between associated connectors.

Example:
The connections between C.B.A.s are shown below.

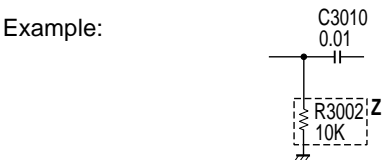
Ref. No. of the connection parts such as lead cable, flexible cable which is supplied as a replacement parts.

The Number of pins of the Connector.



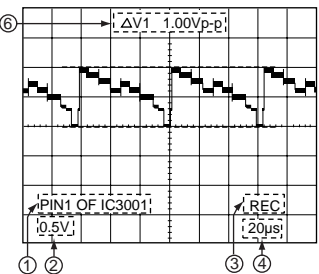
Connector No. on Main C.B.A.

3. Parts enclosed in dashed lines marked "Z" are not used in any models included in this service manual.



Signal Waveform Note

How to read Signal Waveform



- ① Connecting Point
② Volts/Div
③ Operation Mode of VCR
④ Time/Div
⑤ Waveform Point on Schematic
⑥ $\Delta V1$:Peak to Peak

WF5 ← ⑤

Voltage Chart Note

Voltage Measurement

- a. Color bar signal in SP mode.
b. ---:Unmeasurable or not necessary to measure.

Circuit Board Layout Note

Circuit Board Layout shows components installed for various models.
For proper parts content for the model you are servicing, please refer to the schematic diagram and parts list.

Comparison chart of models & marks

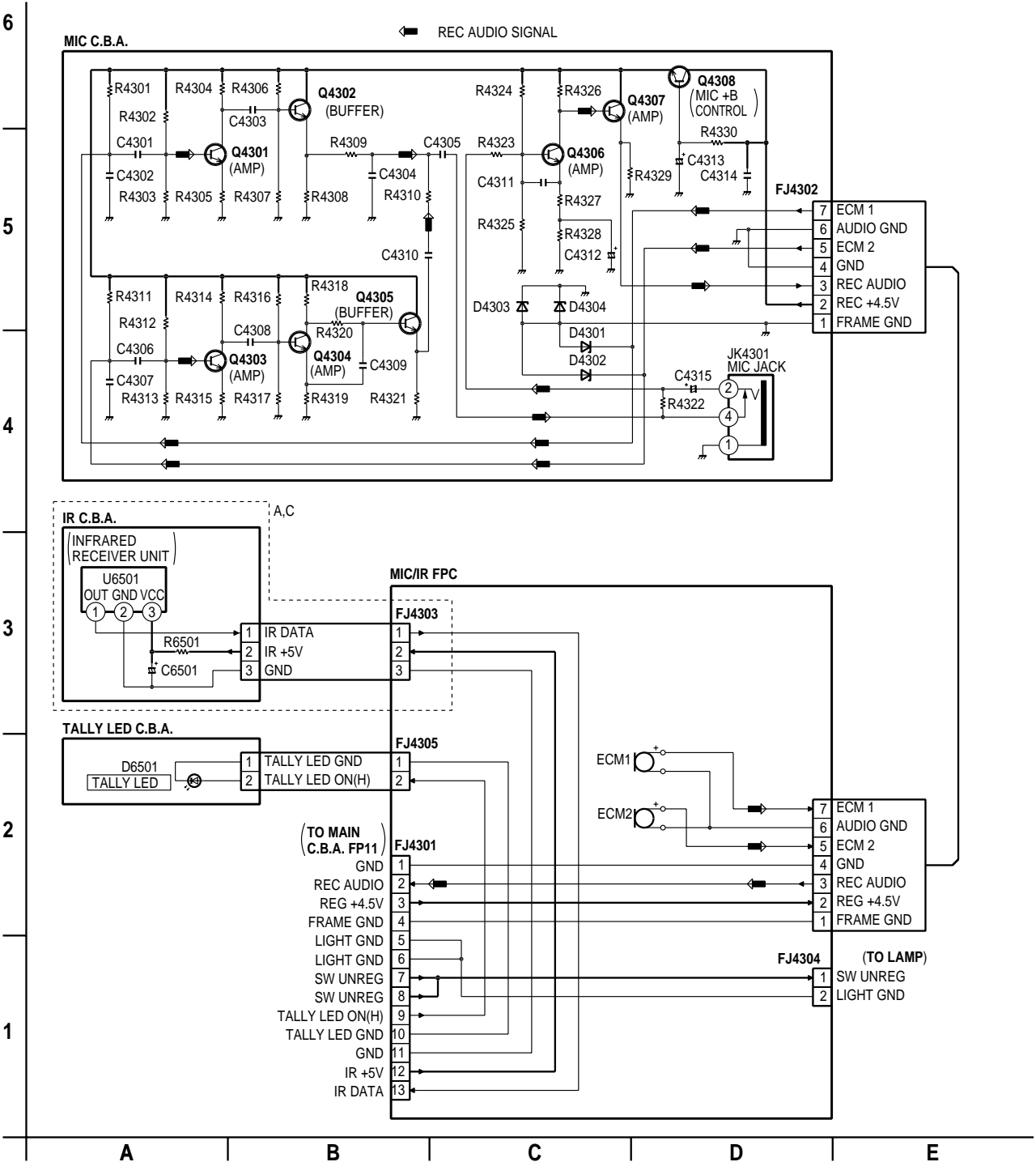
MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z

Note:
Refer to item 3 of Schematic Diagram Notes for mark "Z".

MIC/IR UNIT SCHEMATIC DIAGRAM

"FOR REFERENCE ONLY"

NOTE:
MIC/IR UNIT IS NOT SERVICEABLE AND IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.

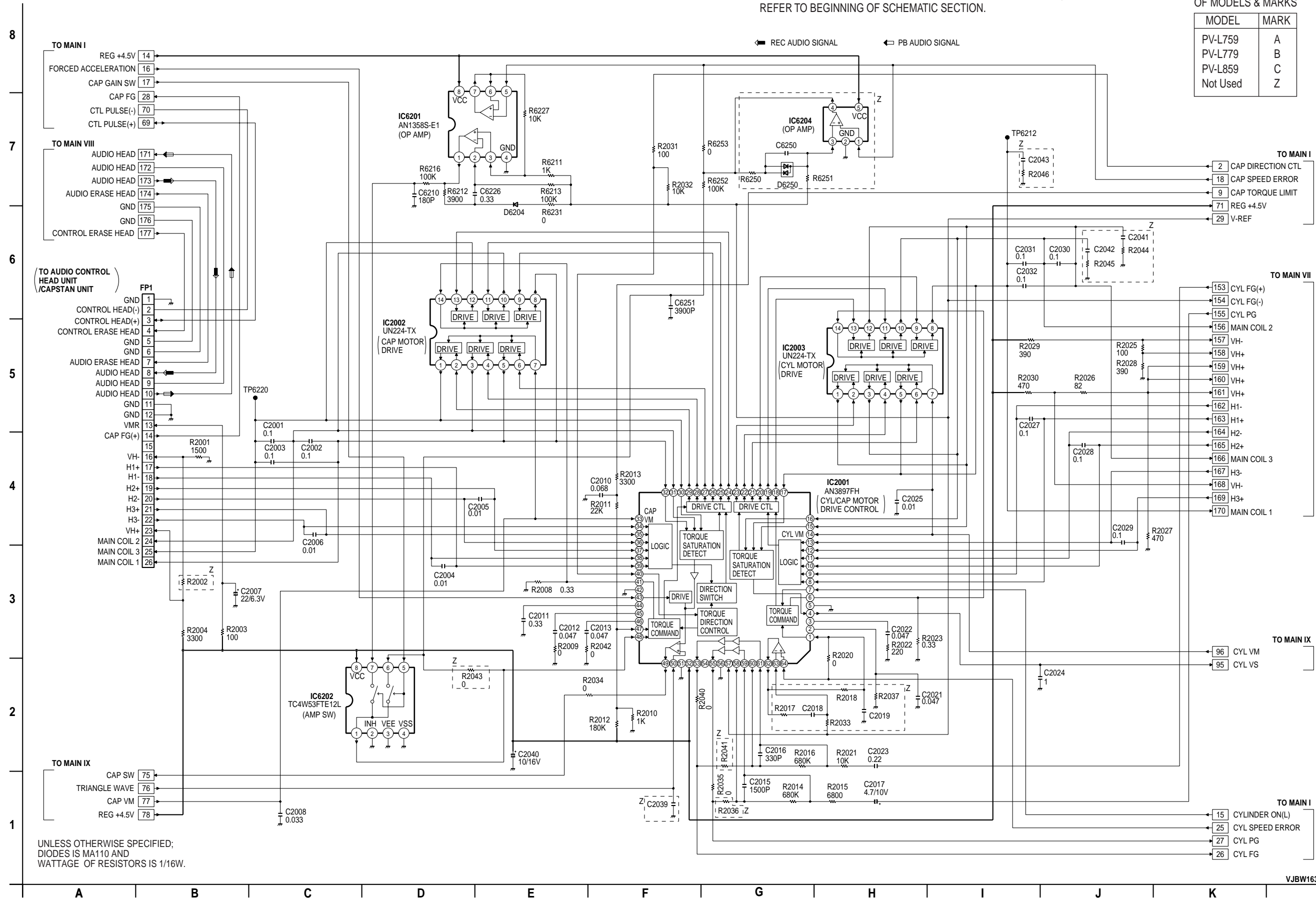


MAIN II (CYLINDER/CAPSTAN DRIVE) SCHEMATIC DIAGRAM

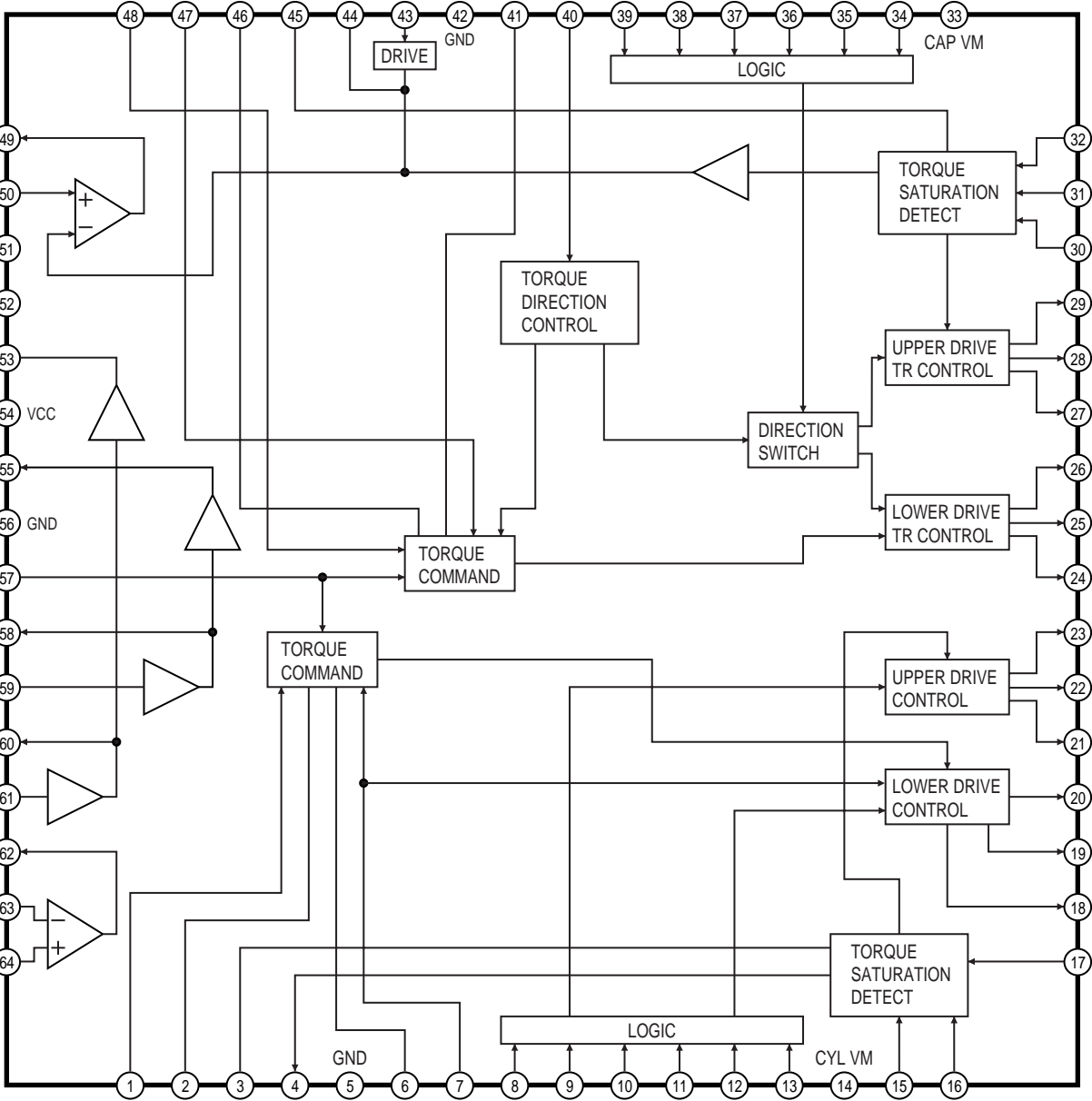
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z



IC2001 CYLINDER/CAPSTAN MOTOR DRIVE CONTROL IC-DETAIL BLOCK DIAGRAM, AN3897FH

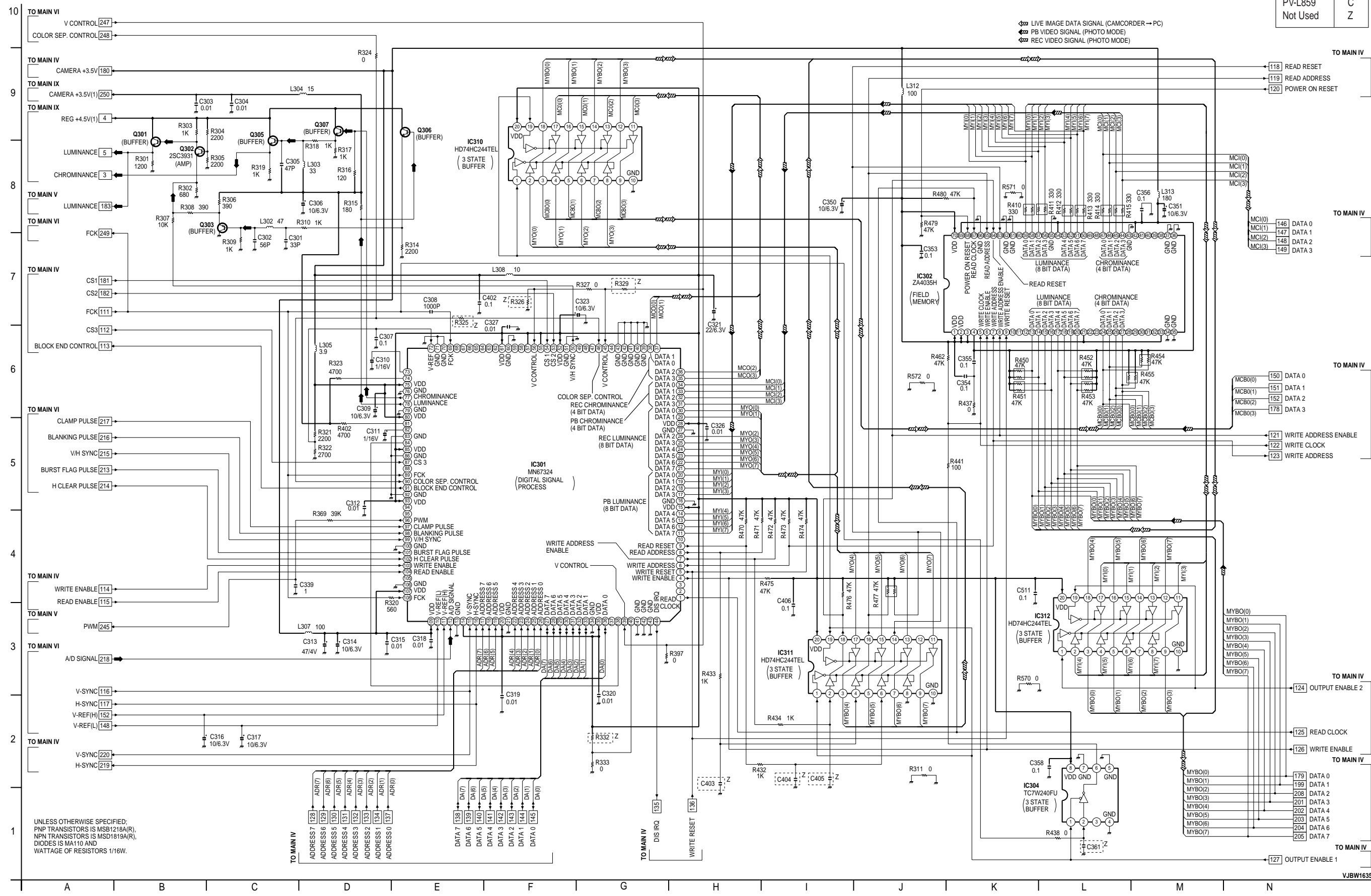


MAIN III (CAMERA I) SCHEMATIC DIAGRAM

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z



UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS MSB1218A(R),
NPN TRANSISTORS IS MSD1819A(R),
DIODES IS MA110 AND
WATTAGE OF RESISTORS 1/16W.

MAIN IV (CAMERA II) / PC OUT JACK SCHEMATIC DIAGRAM

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

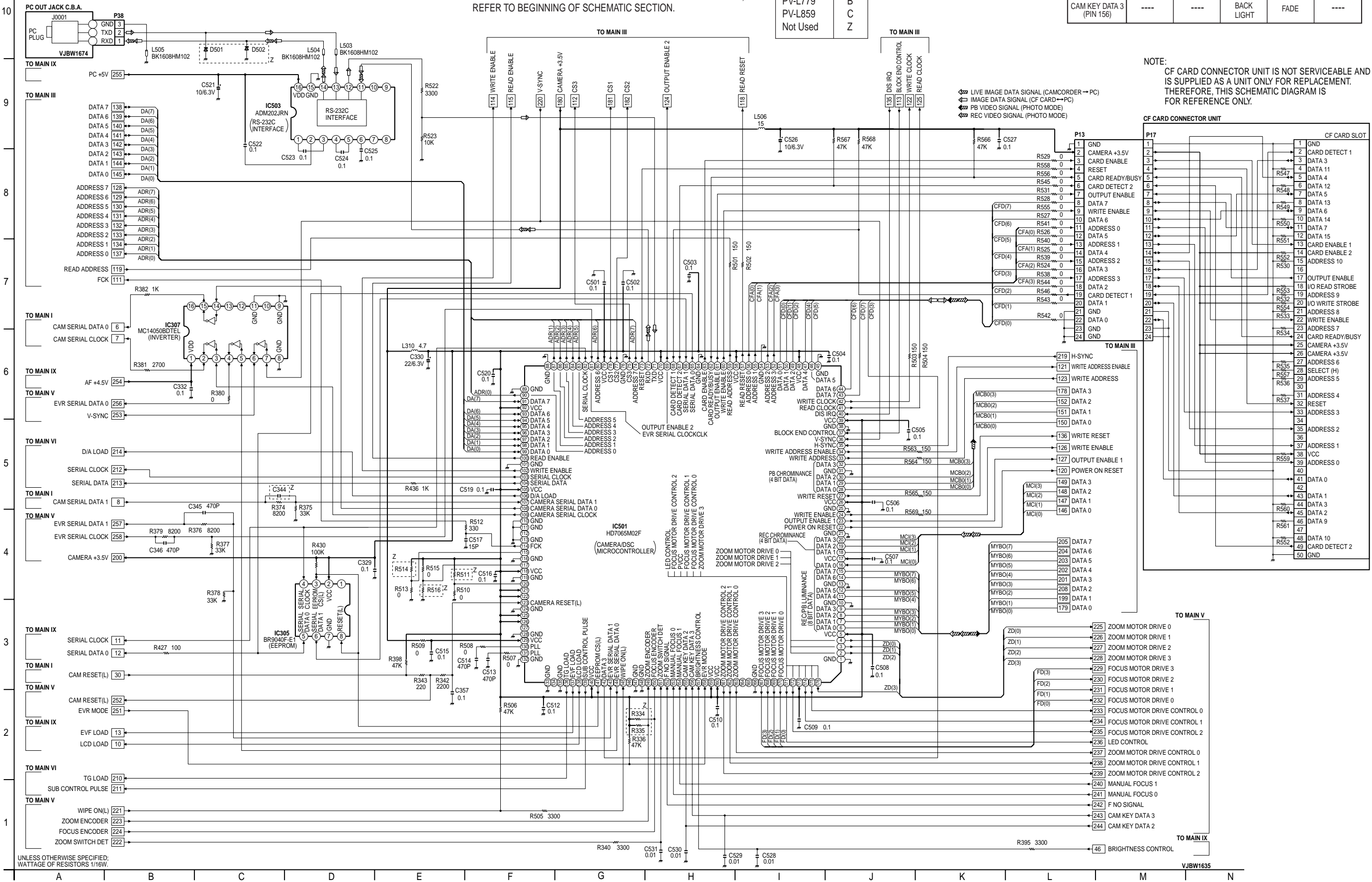
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z

IC501 KEY MATRIX CHART

TERMINAL VOLTAGE	0~ 0.14V	0.71~ 0.99V	1.56~ 1.84V	2.41~ 2.69V	3.36~ 3.64V
CAM KEY DATA 2 (PIN 155)	EIS	DIGITAL ZOOM	STILL /STROBE	HSS	----
CAM KEY DATA 3 (PIN 156)	----	----	BACK LIGHT	FADE	----

NOTE:
CF CARD CONNECTOR UNIT IS NOT SERVICEABLE AND
IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.
THEREFORE, THIS SCHEMATIC DIAGRAM IS
FOR REFERENCE ONLY.



NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS MSB1218A(R),
NPN TRANSISTORS IS MSD1819A(R),
DIODES IS MA110 AND
WATTAGE OF RESISTORS 1/16W.

JJBW1635

COMPARISON CHART OF MODELS & MARKS

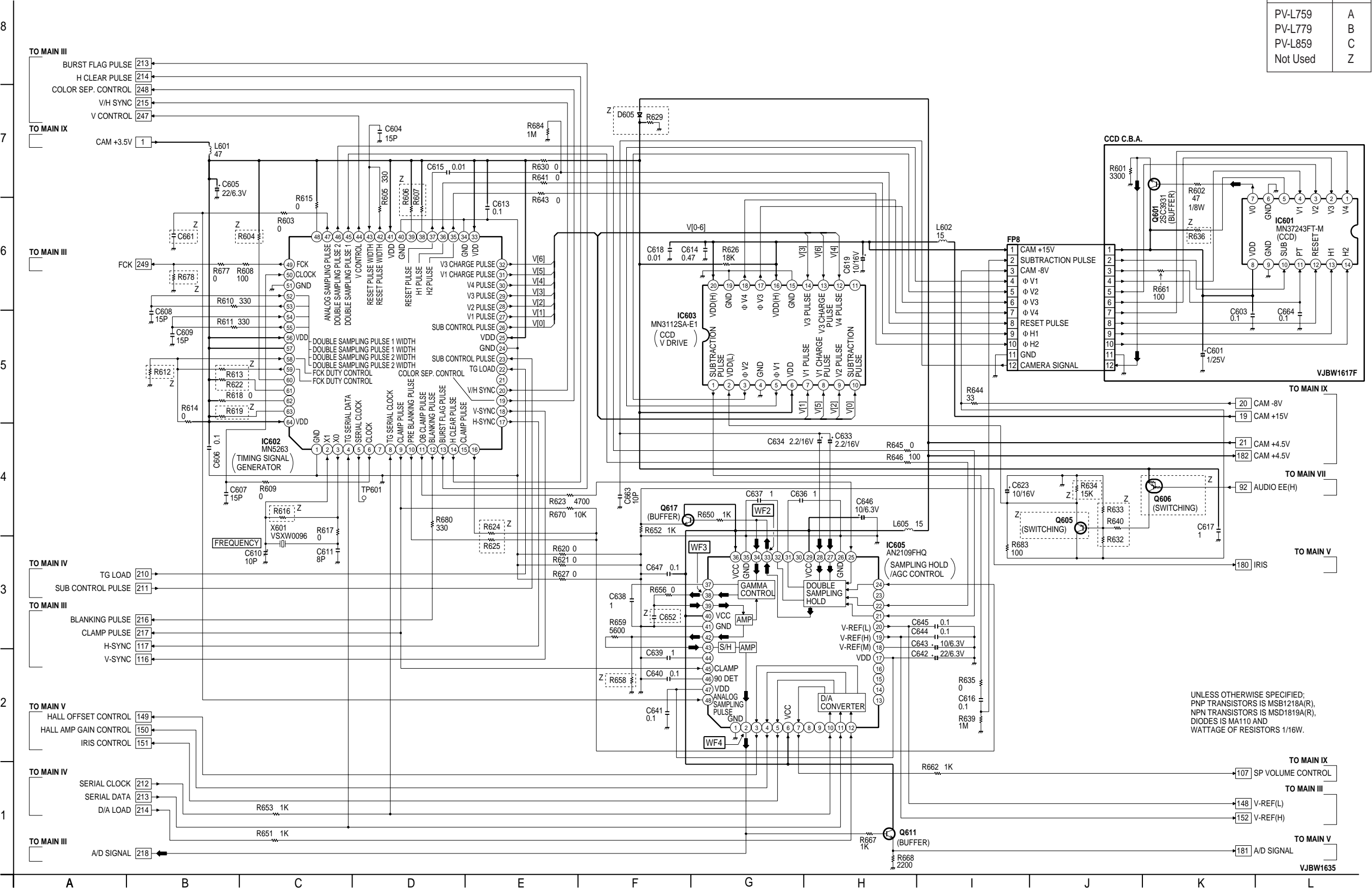
UNLESS OTHERWISE SPECIFIED;
PNP TRANSISTORS IS MSB1218A(R),
NPN TRANSISTORS IS MSD1819A(R),
DIODES IS MA110 AND
WATTAGE OF RESISTORS 1/16W.

MAIN VI (CCD DRIVE) / CCD SCHEMATIC DIAGRAM

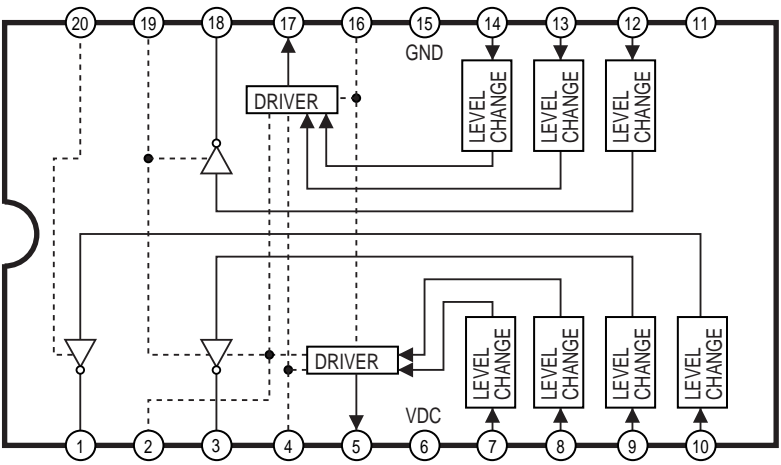
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART
OF MODELS & MARKS

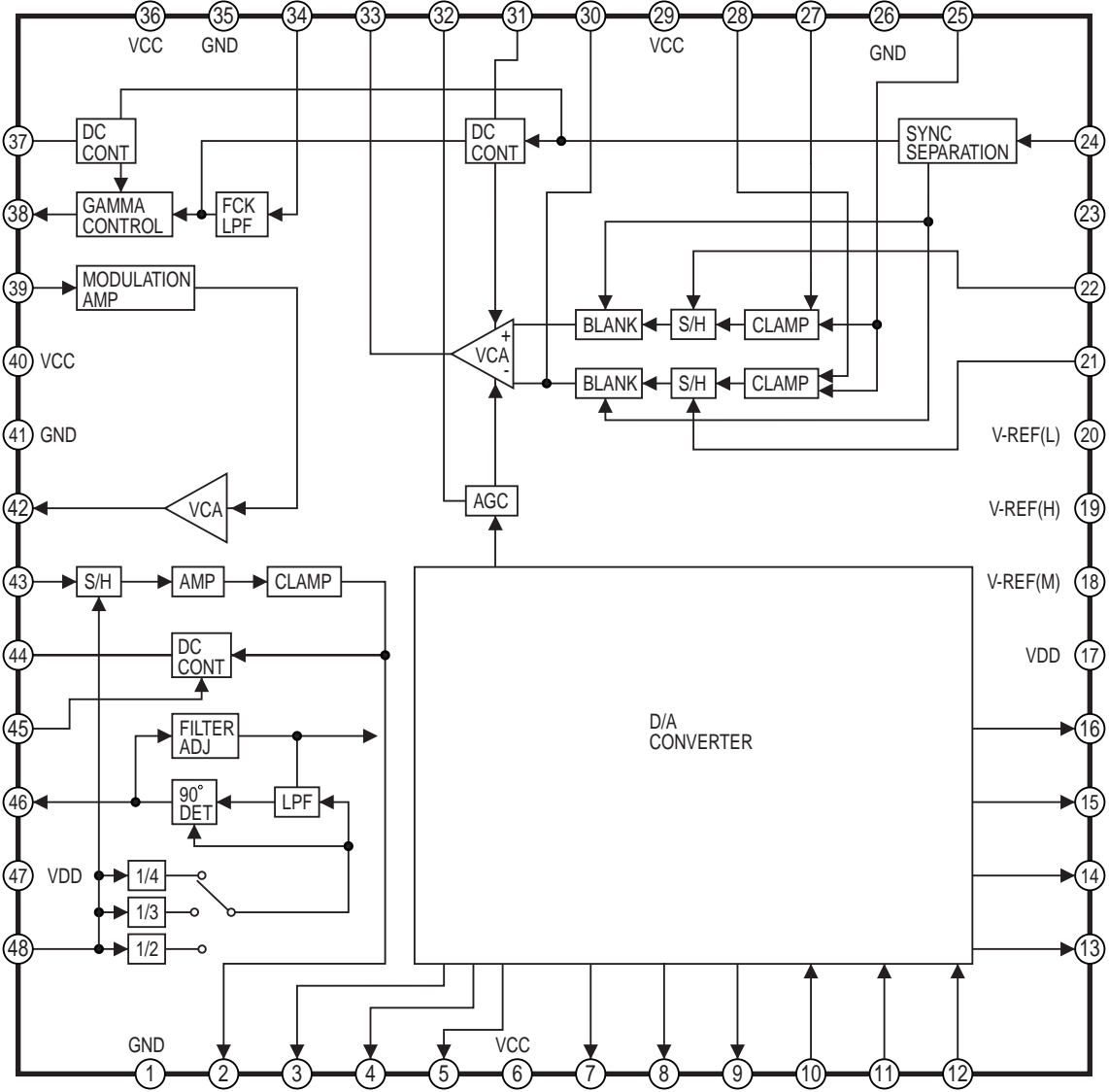
MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z



IC603 CCD V DRIVE IC-DETAIL BLOCK DIAGRAM, MN3112SA-E1



IC605 SAMPLING HOLD/AGC CONTROL IC-DETAIL BLOCK DIAGRAM, AN2109FHQ

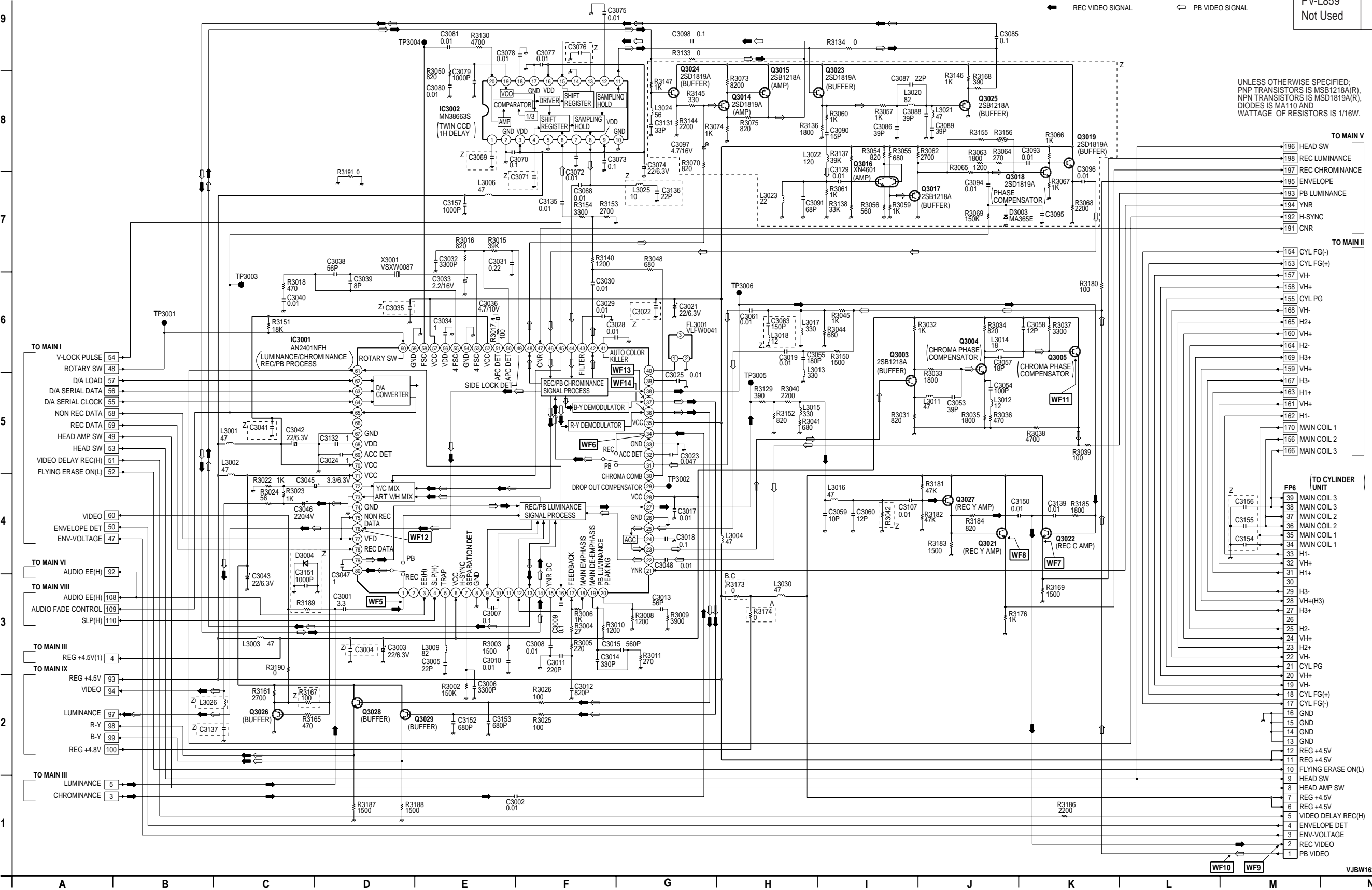


MAIN VII (VIDEO) SCHEMATIC DIAGRAM

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

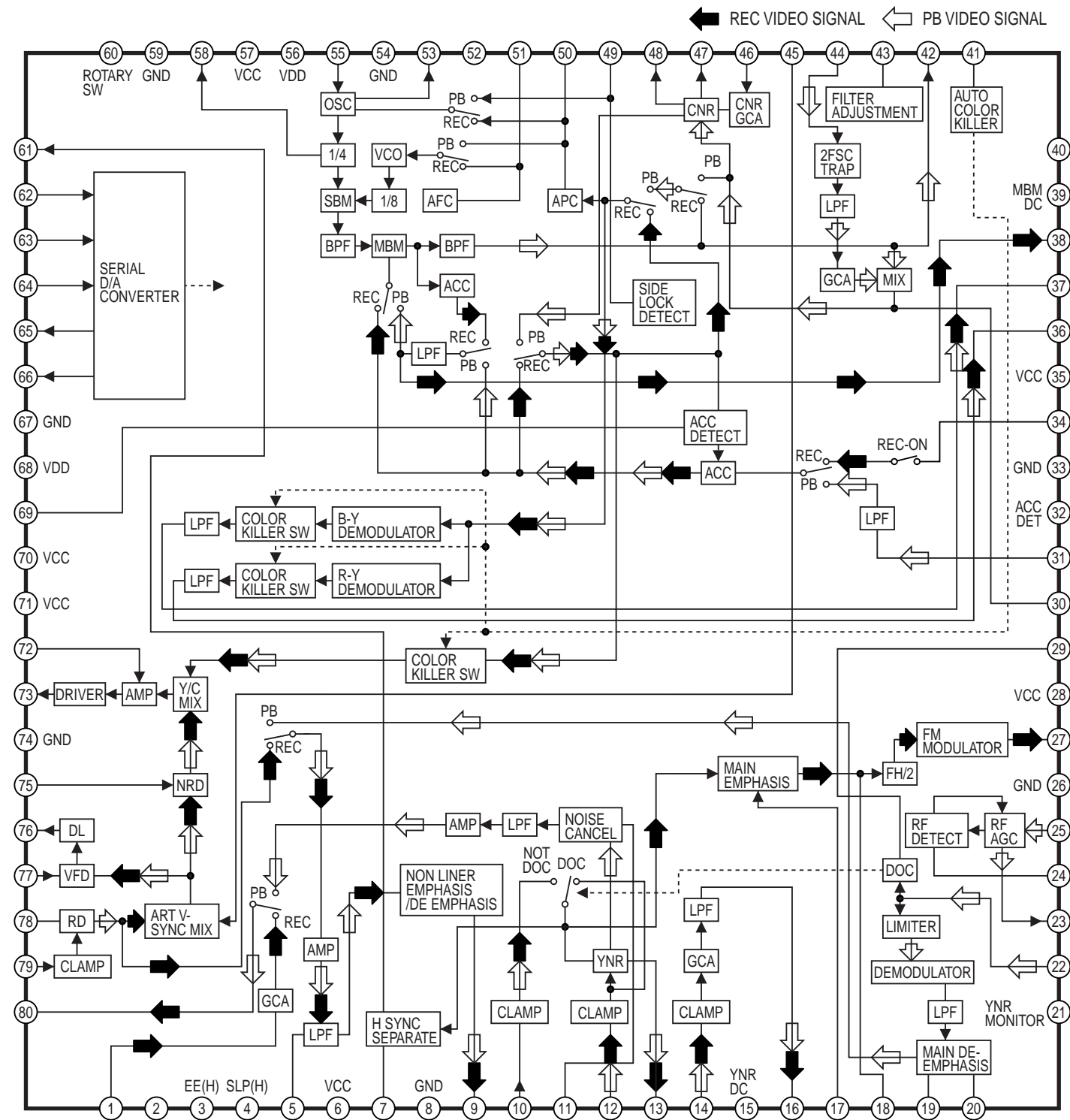
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z



UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS MSB1218A(R),
NPN TRANSISTORS IS MSD1819A(R),
DIODES IS MA110 AND
WATTAGE OF RESISTORS IS 1/16W.

IC3001 VIDEO/AUDIO PROCESS IC-DETAIL BLOCK DIAGRAM, AN2401NFH

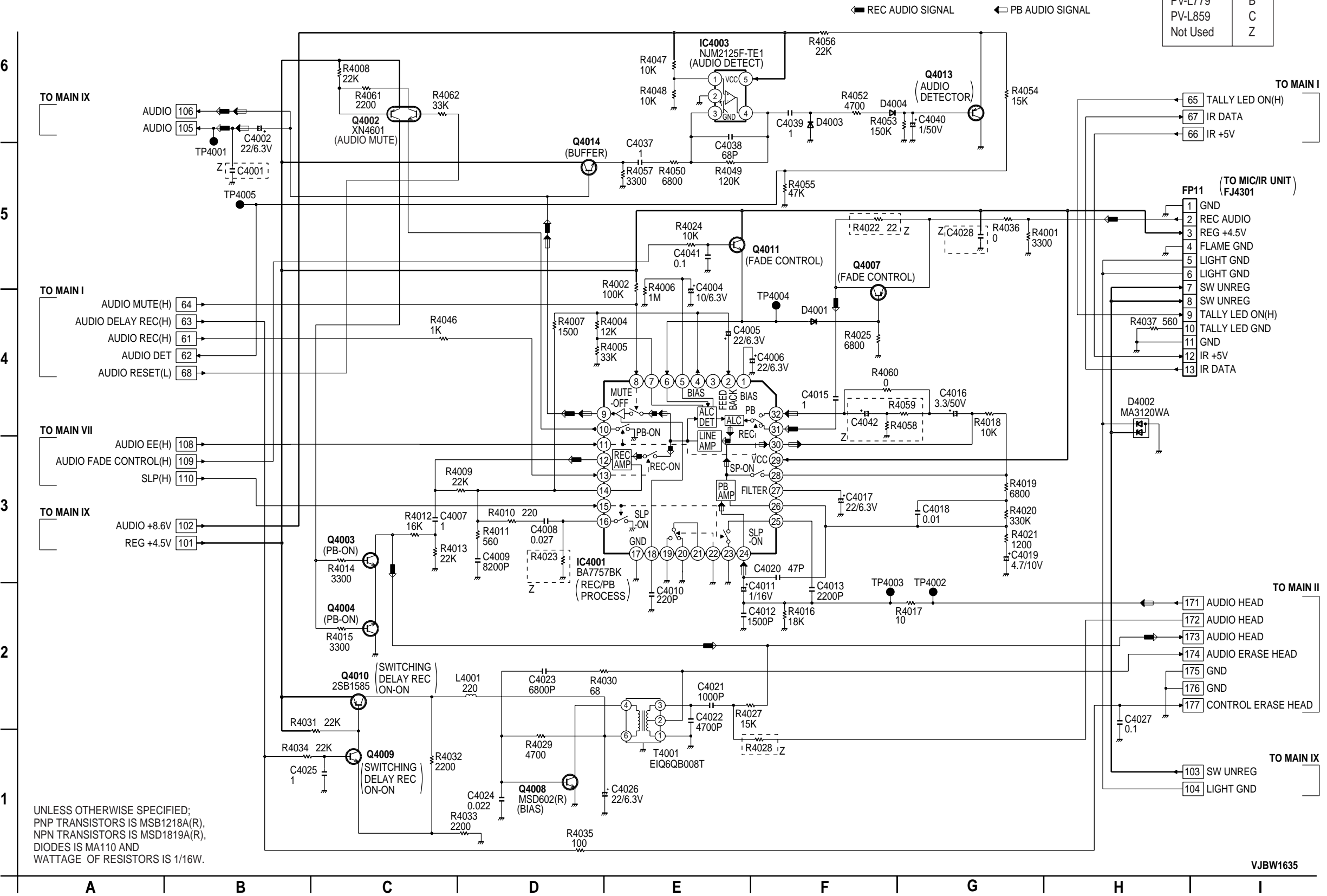


MAIN VIII (AUDIO) SCHEMATIC DIAGRAM

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART
OF MODELS & MARKS


MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z



MAIN IX (POWER SUPPLY) SCHEMATIC DIAGRAM

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 3.15A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCENDIE N'UTILISER QUE DES FUSIBLES DE MÊME
TYPE 3.15A 125V

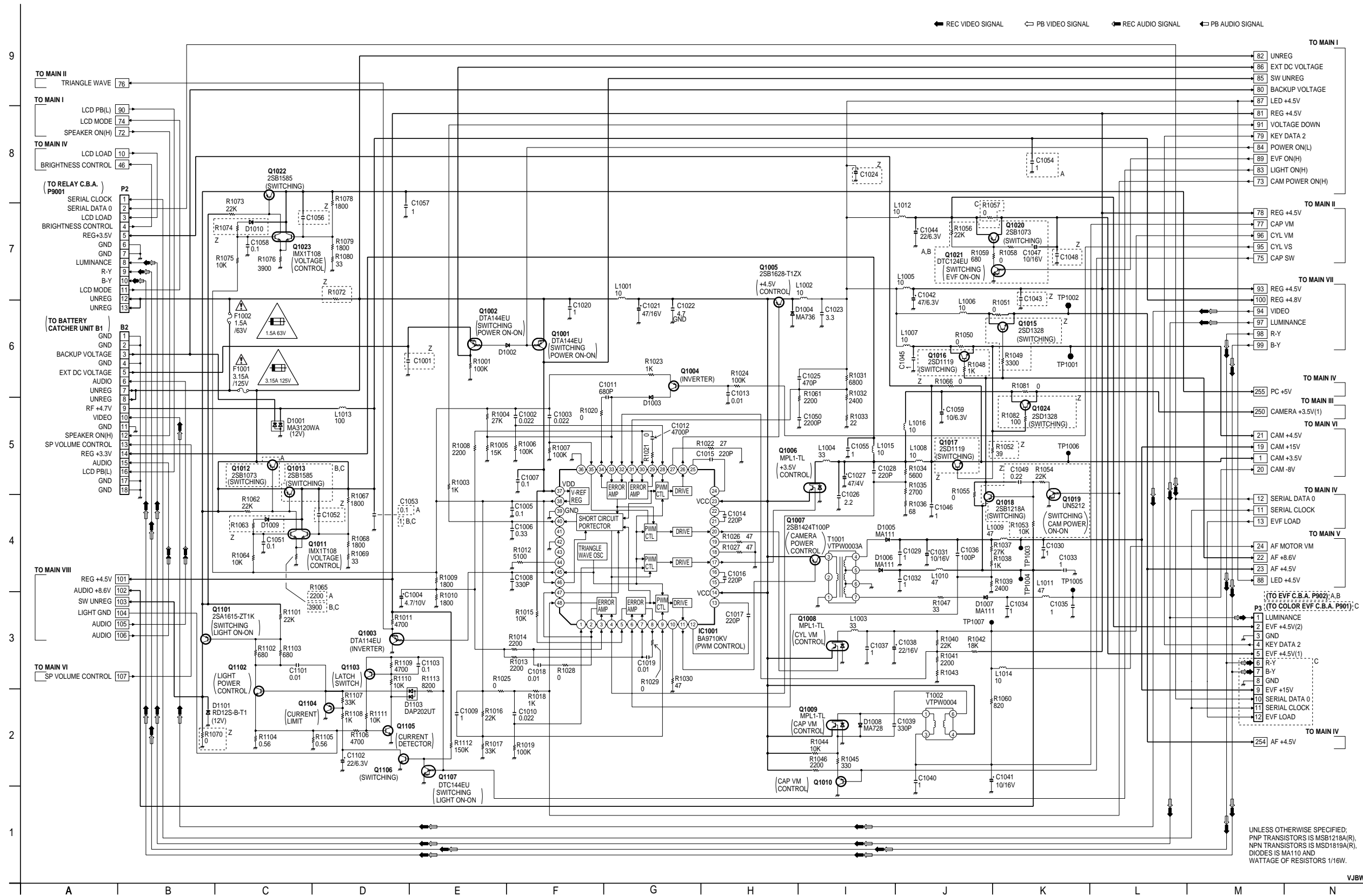
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 1.5A 63V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCENDIE N'UTILISER QUE DES FUSIBLES DE MÊME
TYPE 1.5A 63V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

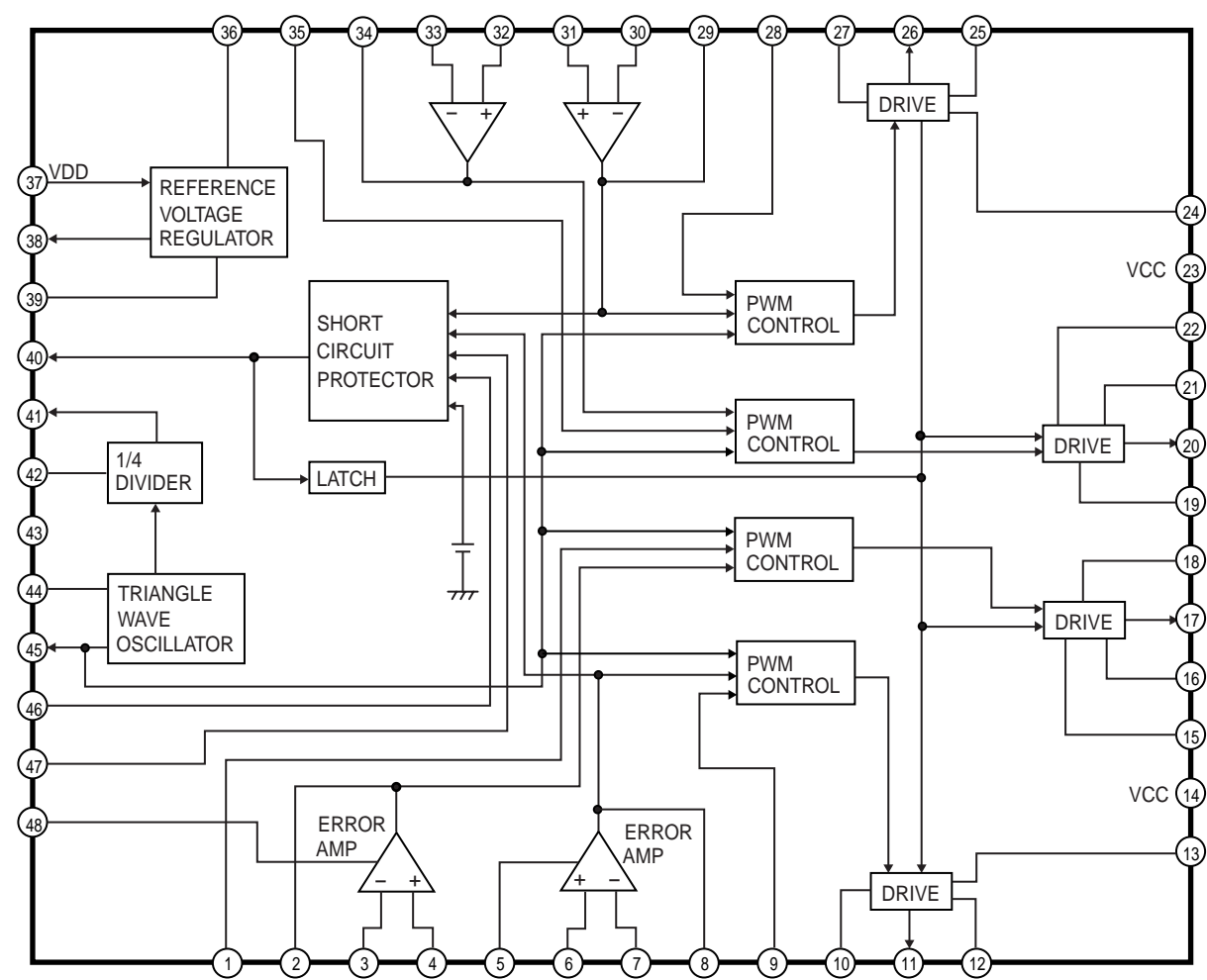
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z



IC1001 PWM CONTROL IC-DETAIL BLOCK DIAGRAM, BA7757BK



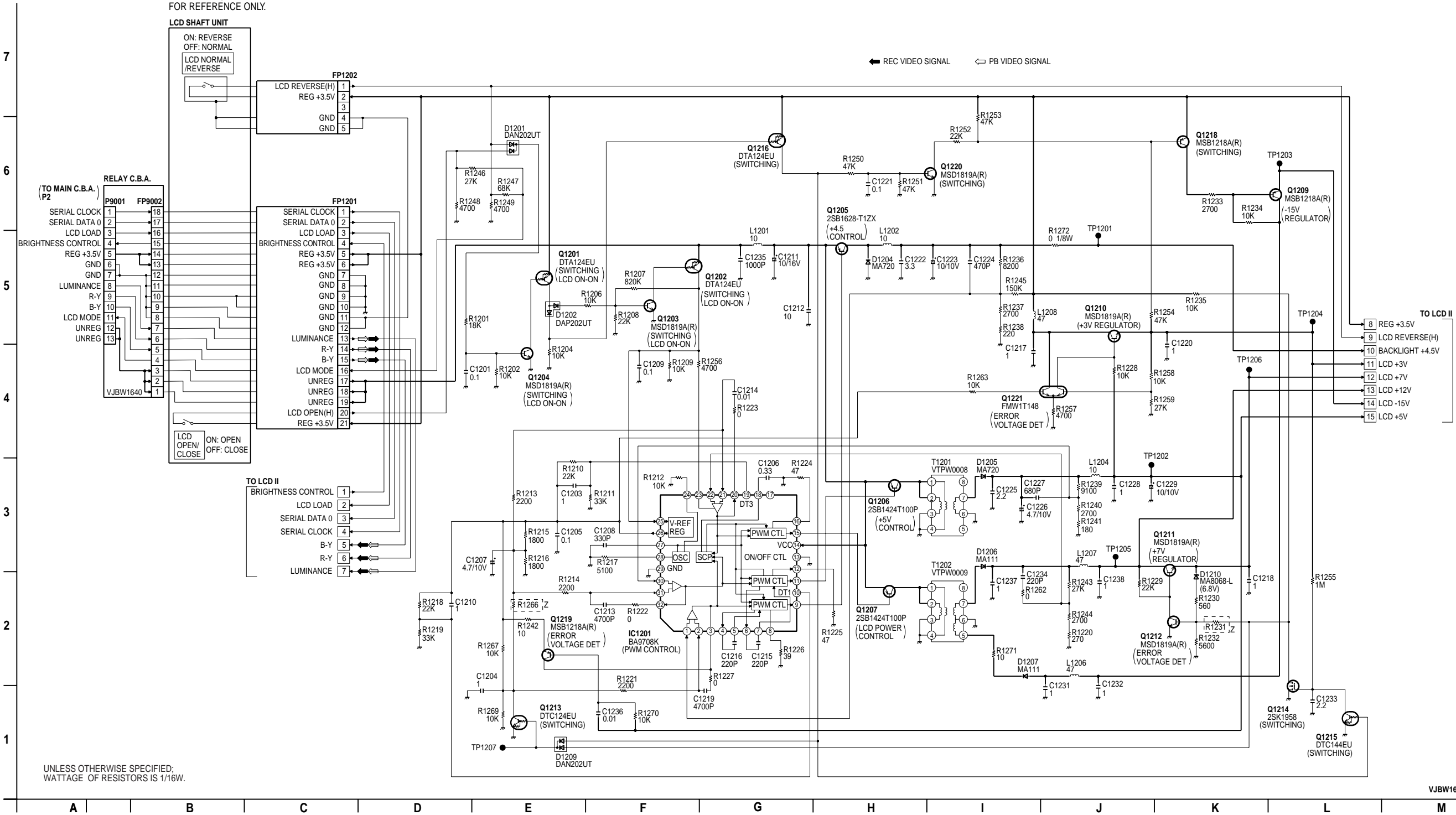
LCD I (LCD POWER) / RELAY SCHEMATIC DIAGRAM

COMPARISON CHART
OF MODELS & MARKS

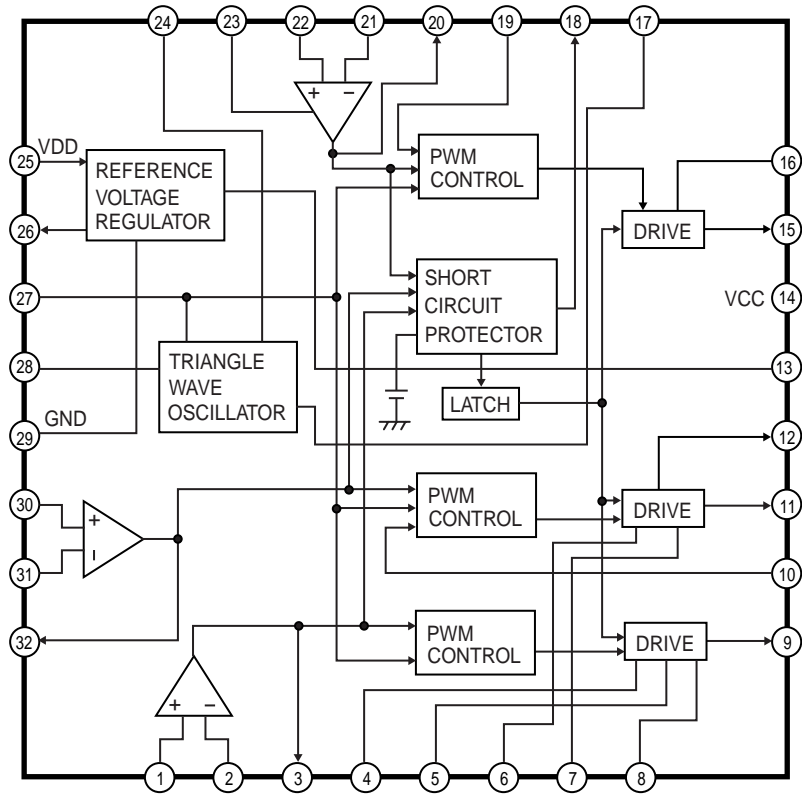
MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

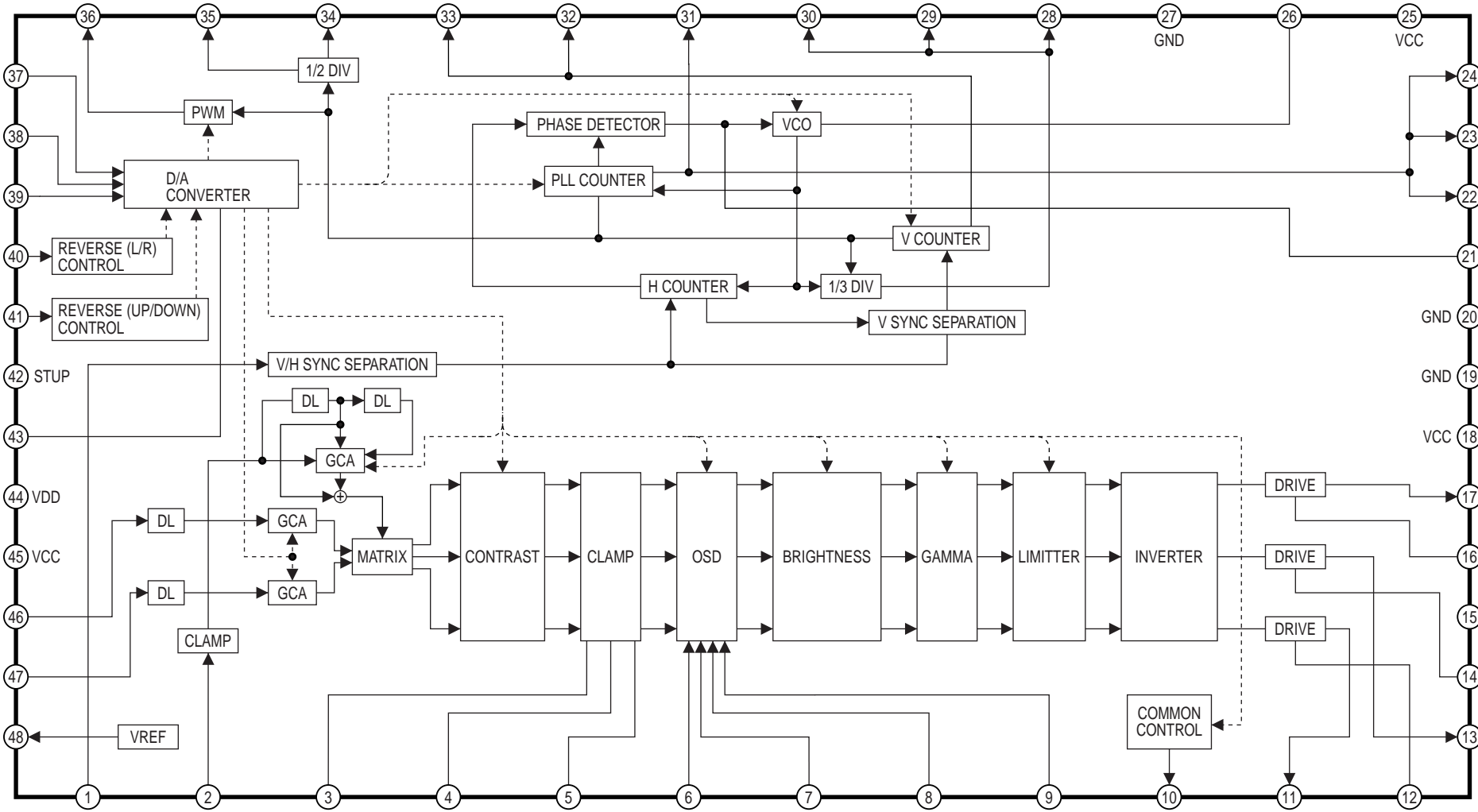
NOTE:
LCD SHAFT UNIT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.
THEREFORE, THIS SCHEMATIC DIAGRAM IS
FOR REFERENCE ONLY.



IC1201 PWM CONTROL IC-DETAIL
BLOCK DIAGRAM, BA9708K




IC9010 RGB SIGNAL PROCESS/LCD PANEL INDICATOR CONTROL IC-DETAIL BLOCK DIAGRAM,
AN2537FHQ



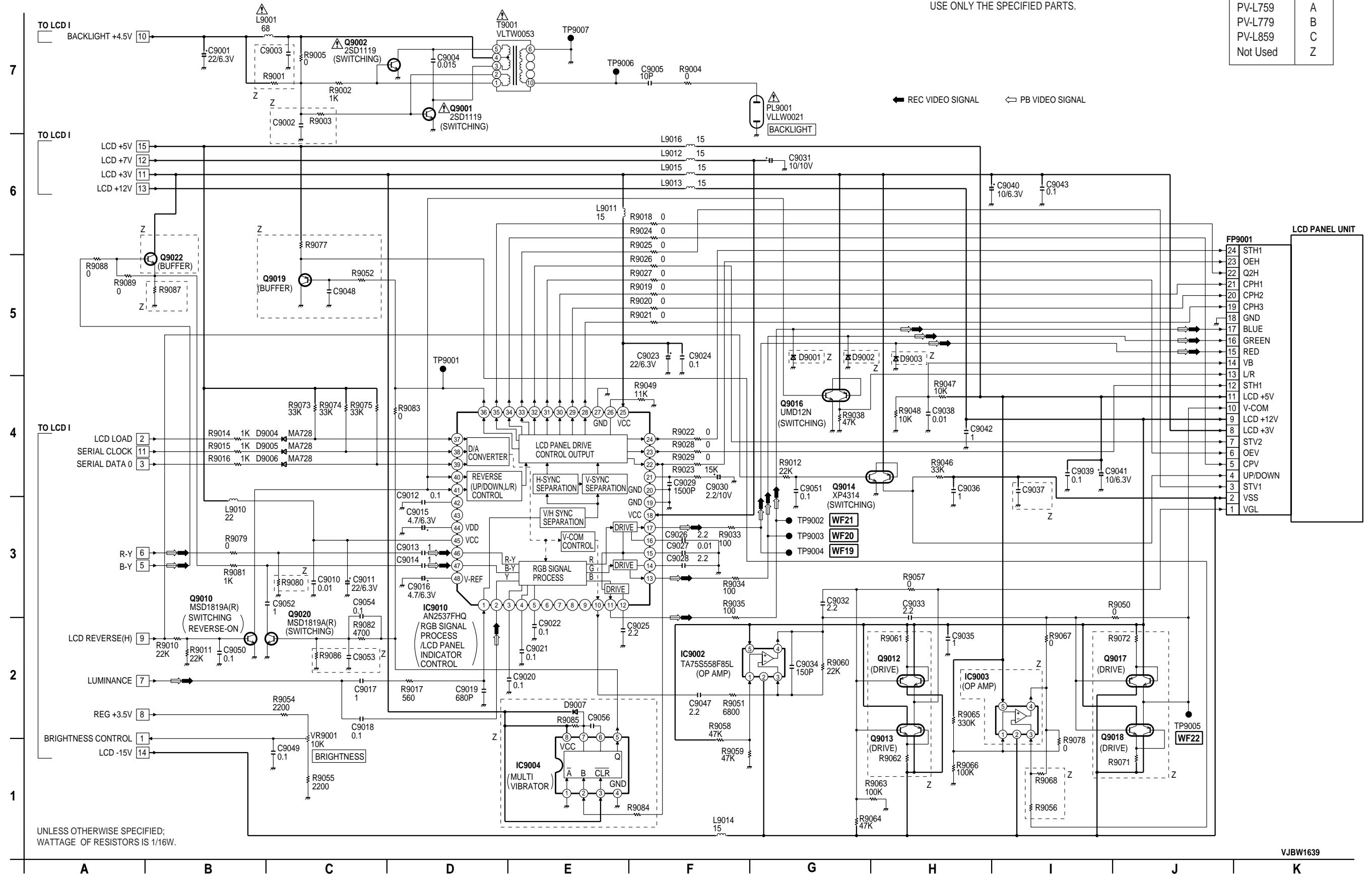
LCD II (LCD DRIVE) SCHEMATIC DIAGRAM

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

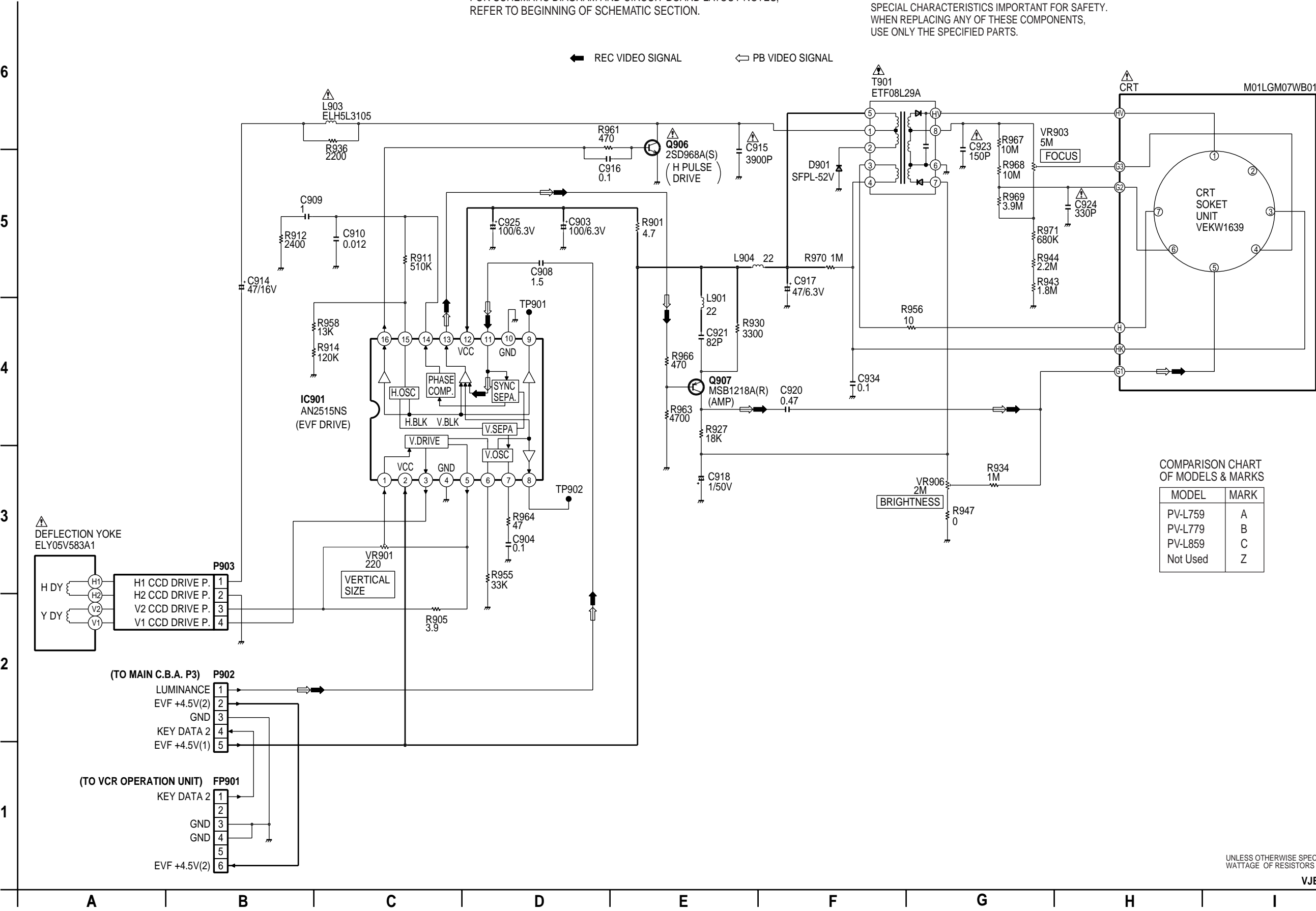
MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z



EVF SCHEMATIC DIAGRAM (A,B)

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.



COMPARISON CHART
OF MODELS & MARKS


MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z

UNLESS OTHERWISE SPECIFIED;
WATTAGE OF RESISTORS IS 1/16W.

VJBW1641

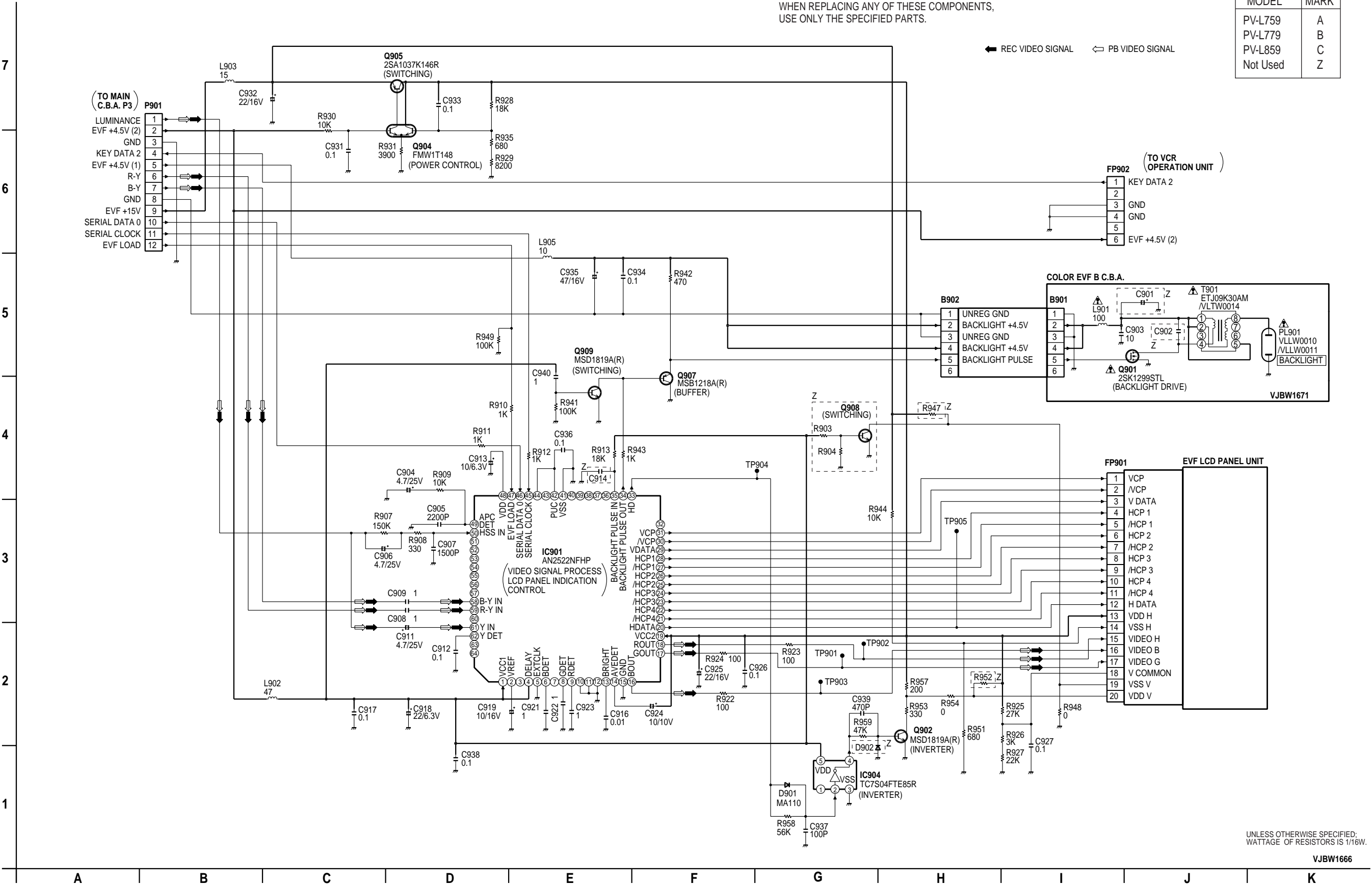
COLOR EVF A / COLOR EVF B SCHEMATIC DIAGRAM (C)

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

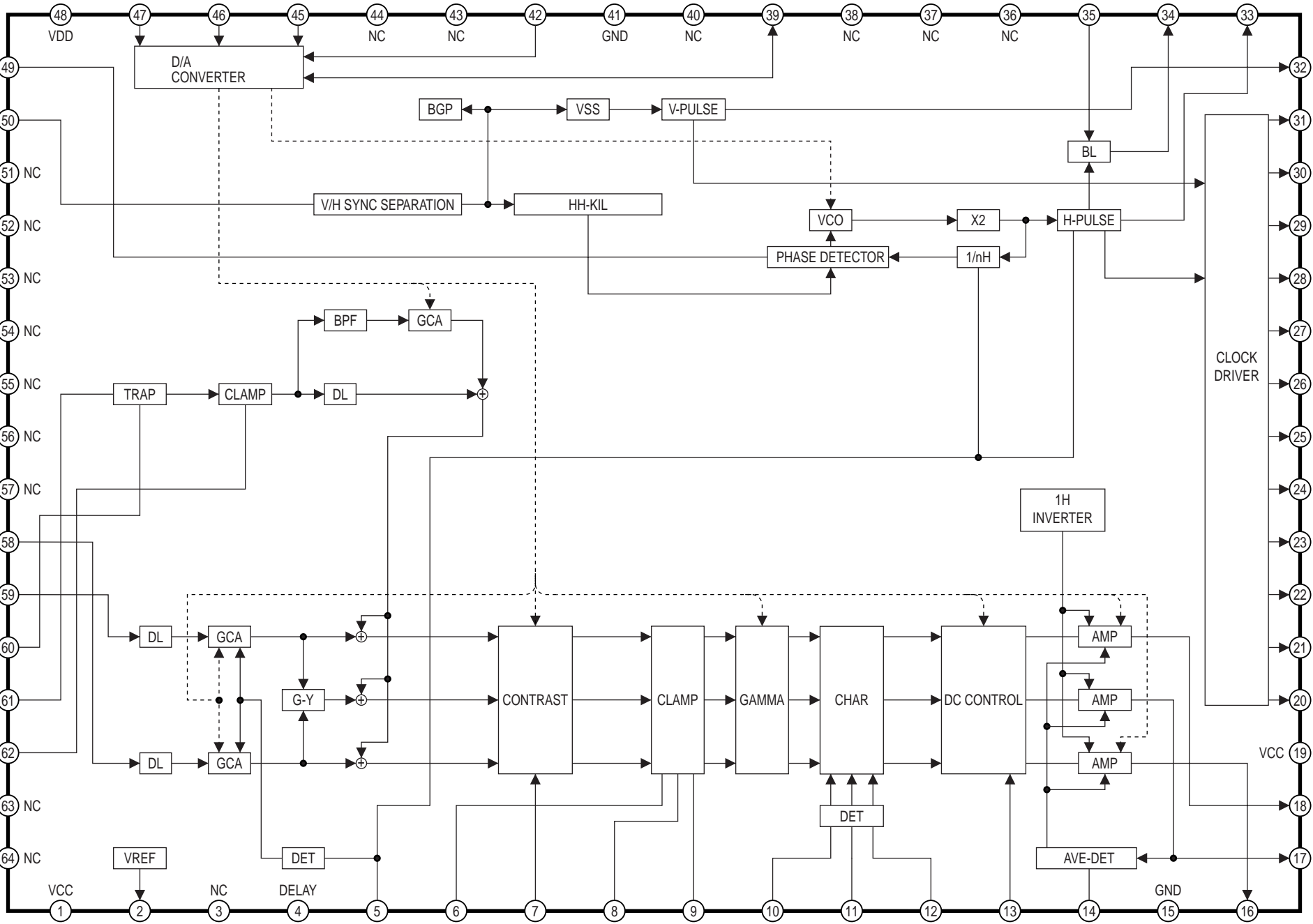
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z



IC901 RGB SIGNAL PROCESS/LCD PANEL INDICATOR CONTROL IC-DETAIL BLOCK DIAGRAM, AN2522NFHP

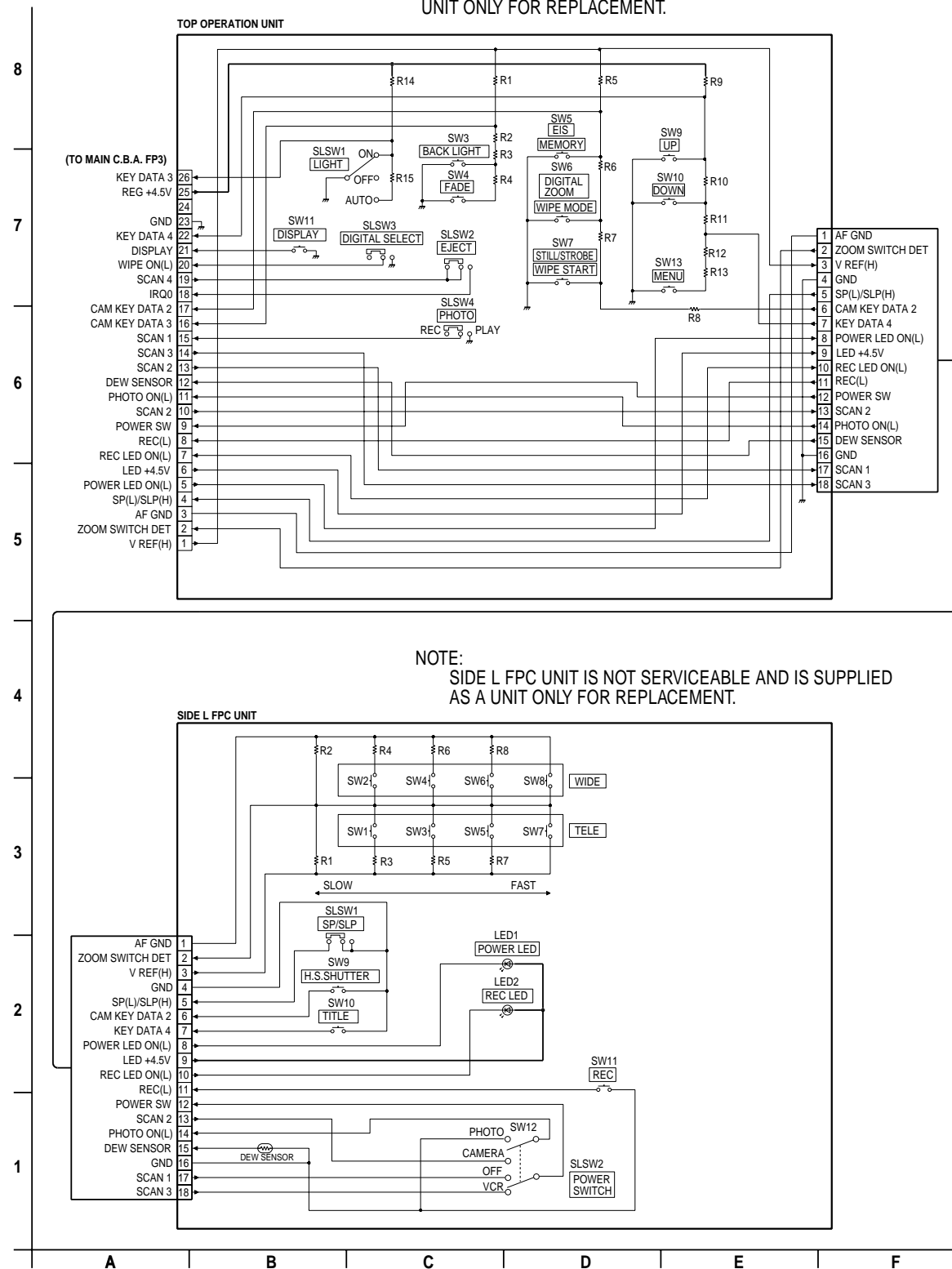


TOP OPERATION UNIT / SIDE L FPC UNIT SCHEMATIC DIAGRAM

BATTERY CATCHER UNIT SCHEMATIC DIAGRAM

“FOR REFERENCE ONLY”

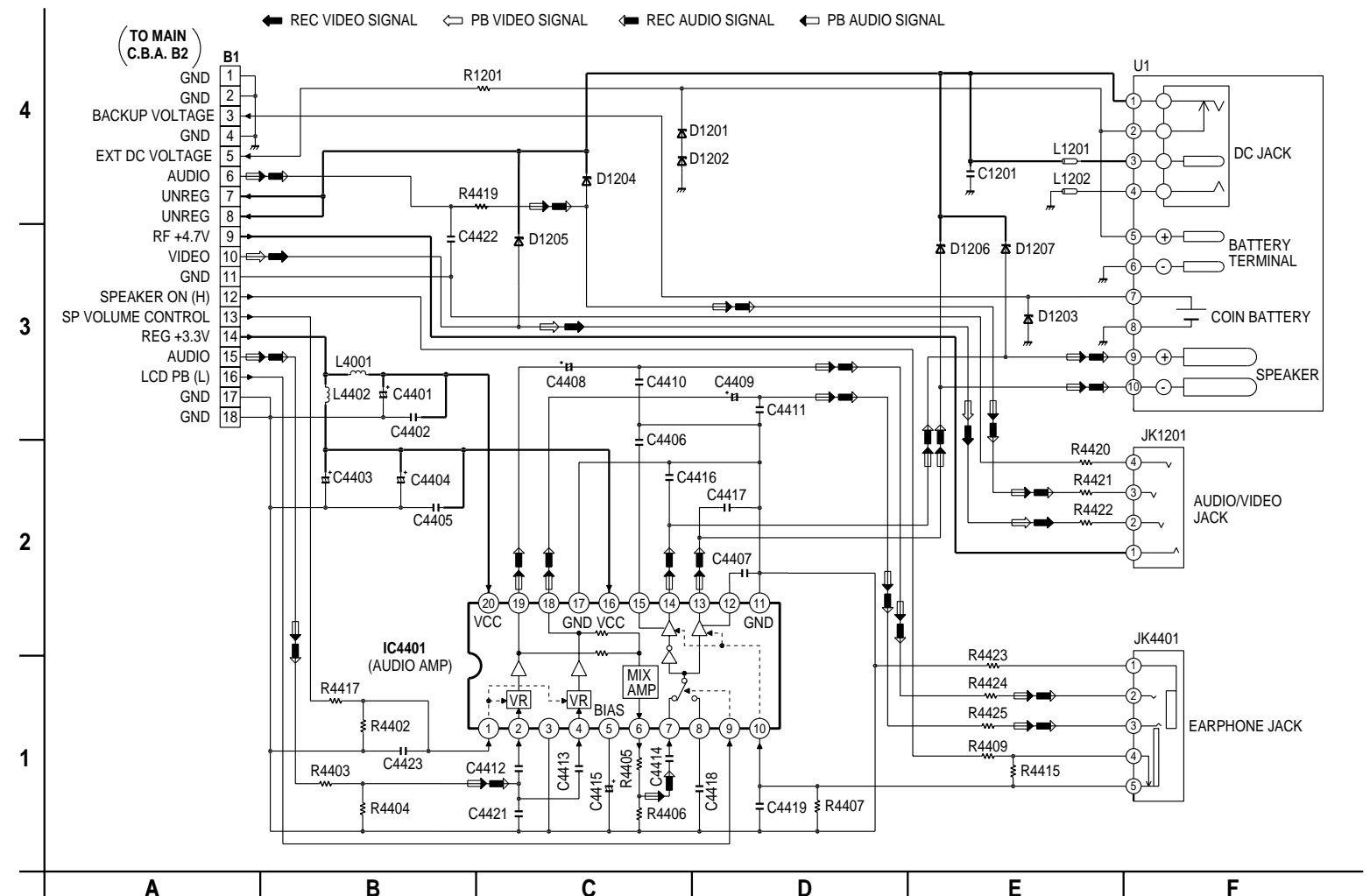
NOTE:
TOP OPERATION UNIT IS NOT SERVICEABLE AND IS SUPPLIED AS A
UNIT ONLY FOR REPLACEMENT.



NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

“FOR REFERENCE ONLY”

NOTE:
BATTERY CATCHER UNIT IS NOT SERVICEABLE AND
IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



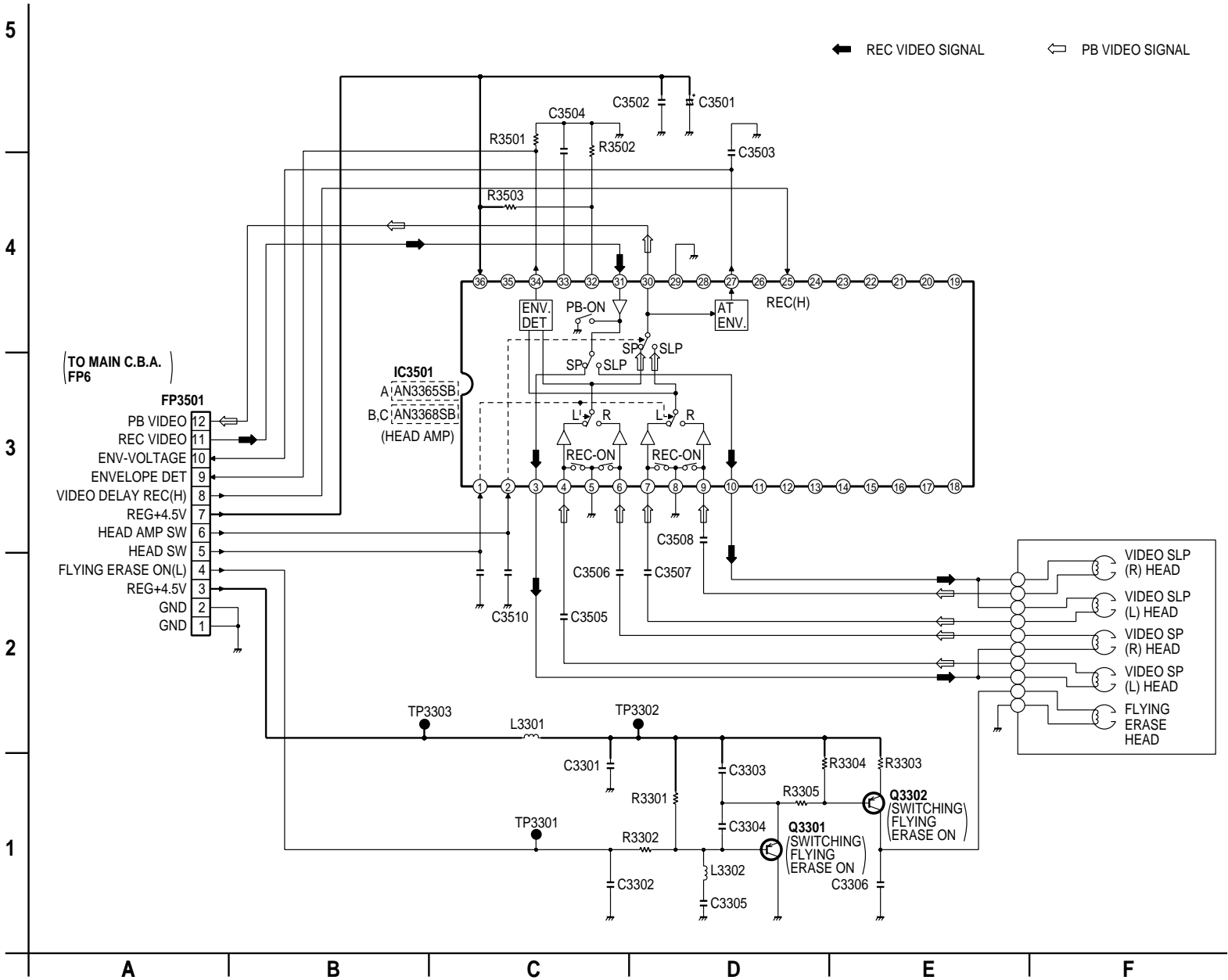
HEAD AMP SCHEMATIC DIAGRAM

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
HEAD AMP C.B.A. WHICH IS LOCATED ON THE LOWER CYLINDER
IS SUPPLIED AS A CYLINDER UNIT ONLY.
HOWEVER, IC3501 (AN3365SB OR AN3368SB) IS AVAILABLE
SEPARATELY AS A REPLACEMENT PART.

COMPARISON CHART
OF MODELS & MARKS

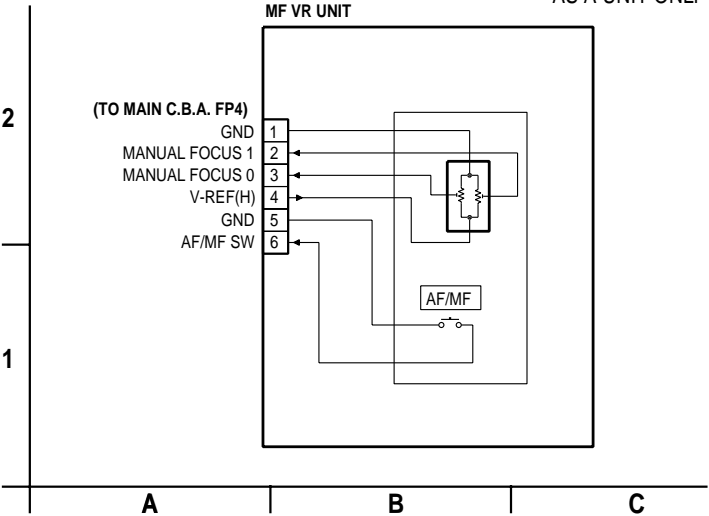
MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z



MF VR UNIT SCHEMATIC DIAGRAM

“FOR REFERENCE ONLY”

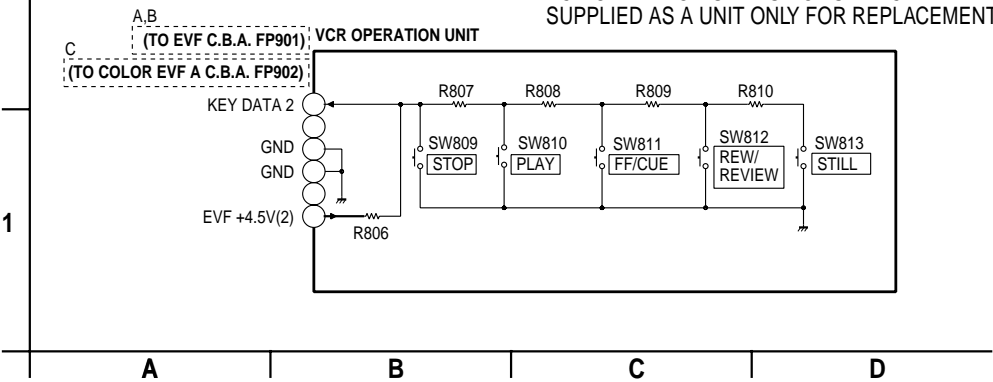
NOTE:
MF VR UNIT IS NOT SERVICEABLE AND IS SUPPLIED
AS A UNIT ONLY FOR REPLACEMENT.



VCR OPERATION UNIT SCHEMATIC DIAGRAM

“FOR REFERENCE ONLY”

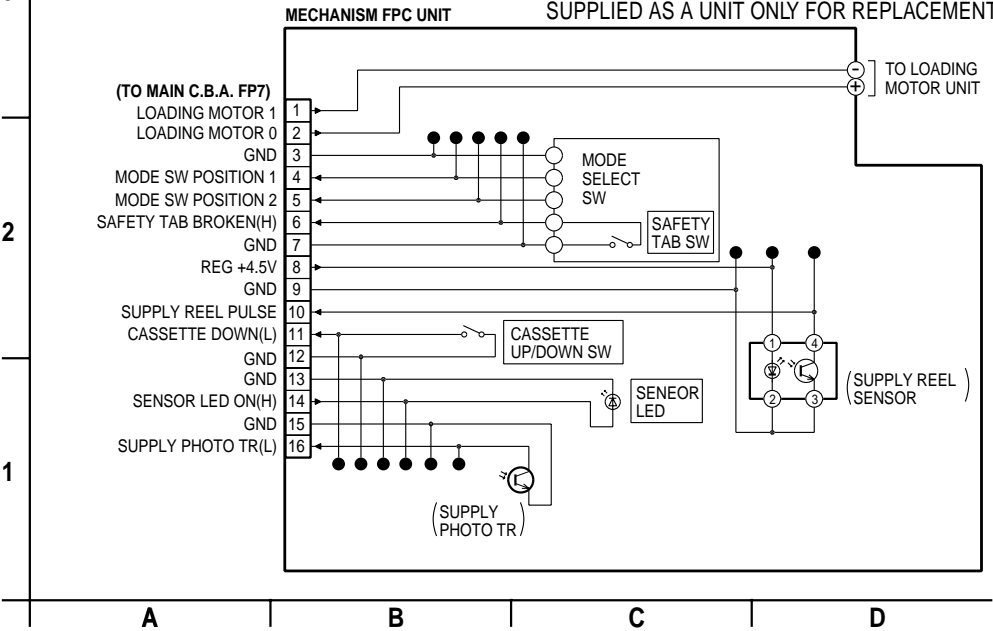
NOTE:
VCR OPERATION UNIT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



MECHANISM FPC UNIT SCHEMATIC DIAGRAM

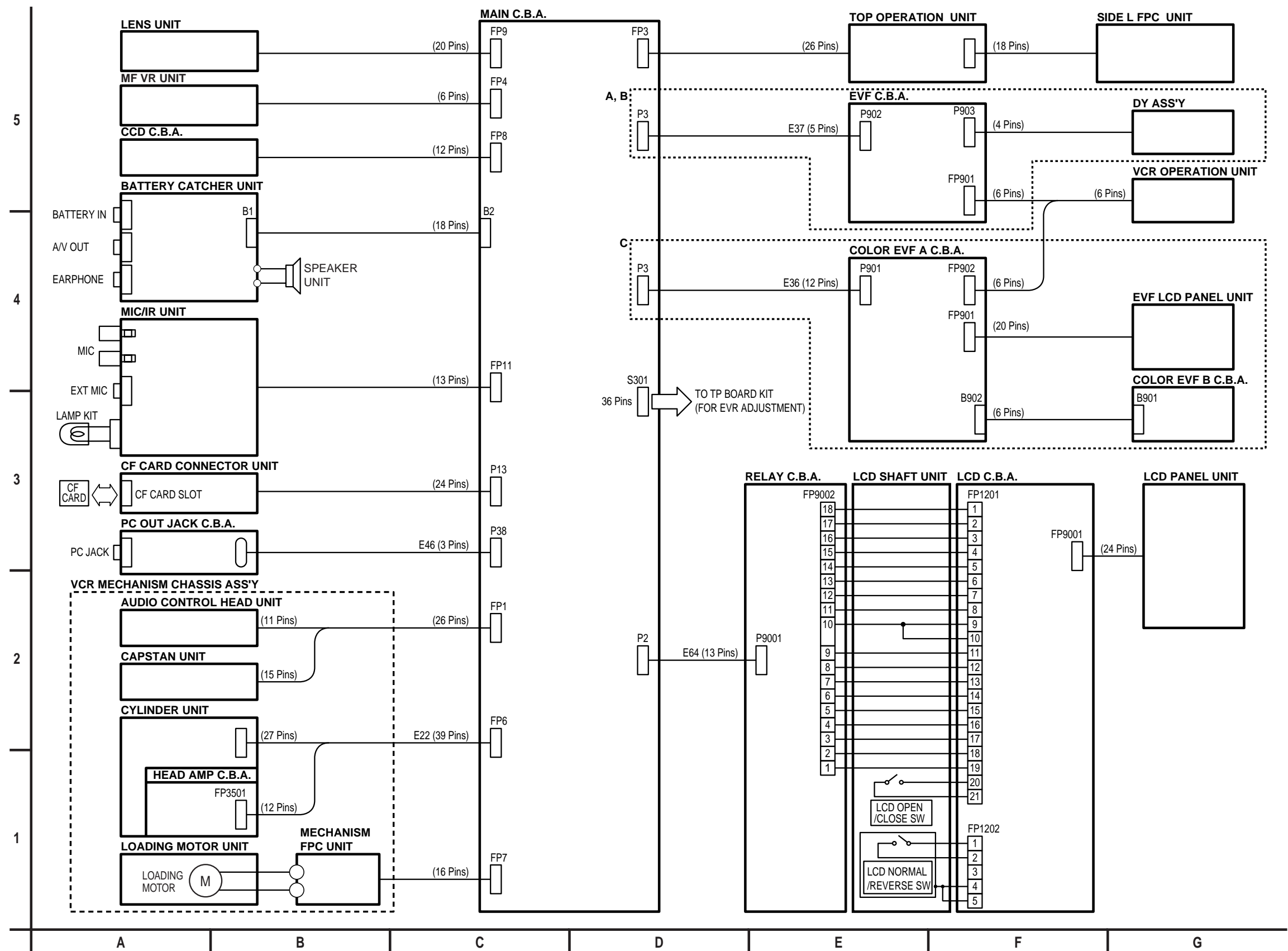
“FOR REFERENCE ONLY”

NOTE:
MECHANISM FPC UNIT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



INTERCONNECTION SCHEMATIC DIAGRAM

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C
Not Used	Z

VOLTAGE CHART

MAIN C.B.A. (CAMERA SECTION)

MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	MODE PIN NO.	CAMERA	
IC301		61	3.5	122	0.3	38	---	10	---	54	3.5	14	2.6	18	1.4	58	3.4	119	0	3	2.4	47	1.7	22	0.6	B	3.1									
1	1.7	62	---	123	3.4	39	---	11	0	55	3.5	IC310		19	3.4	59	3.6	120	0	4	4.9	48	0	23	---	Q302										
2	---	63	---	124	0.8	40	---	12	---	56	3.1	1	3.4	20	3.5	60	3.3	121	3.4	5	4.7	49	1.7	24	0.4	E	1.5									
3	---	64	---	125	1.6	41	---	13	---	57	3.5	2	1.6	IC501		61	3.3	122	3.4	6	9.5	50	1.7	25	0	C	3.0									
4	3.5	65	---	126	2.8	42	3.5	14	1.6	58	3.5	3	1.7	1	0	62	3.6	123	3.3	7	9.0	51	0	26	0	B	2.2									
5	3.5	66	---	127	0.8	43	0	15	2.1	59	3.1	4	1.6	2	0	63	3.3	124	0	8	0	52	1.1	27	2.0	Q303										
6	3.5	67	---	128	0.9	44	1.8	16	---	60	---	5	1.7	3	0	64	0	125	3.3	9	4.8	53	1.0	28	2.0	E	1.4									
7	3.5	68	---	129	0.8	45	1.7	IC308		61	0	6	1.5	4	0	65	3.3	126	3.4	10	4.7	54	1.1	29	4.3	C	0									
8	3.5	69	1.7	130	1.0	46	1.7	1	0.4	62	3.4	7	1.7	5	3.3	66	1.3	127	1.3	11	3.4	55	1.0	30	---	B	0.8									
9	3.5	70	0	131	0.7	47	1.6	2	---	63	3.5	8	1.7	6	1.6	67	3.6	128	0	12	4.6	56	3.4	31	3.1	Q305										
10	---	71	0	132	0.7	48	---	3	0.2	64	3.5	9	1.7	7	1.6	68	3.6	129	3.4	13	0	57	3.4	32	1.3	E	2.8									
11	3.5	72	0	133	0.9	49	---	4	0	65	3.5	10	0	8	1.7	69	0	130	0	14	9.0	58	1.6	33	1.8	C	4.4									
12	3.5	73	1.0	134	0	50	0.7	5	---	66	---	11	1.8	9	1.6	70	3.4	131	1.6	15	0	59	1.6	34	1.8	B	3.4									
13	3.5	74	1.9	135	3.5	51	2.2	6	0	67	1.7	12	1.8	10	0	71	3.5	132	0	16	4.8	60	0	35	0	Q306										
14	3.5	75	3.5	136	0.9	52	1.7	7	0	68	0	13	1.7	11	1.3	72	3.3	133	0	IC602		61	0	36	4.3	E	2.2									
15	3.5	76	0	137	---	53	1.8	8	0	69	---	14	1.5	12	0.9	73	0	134	---	1	0	62	3.5	37	3.0	C	4.4									
16	0	77	3.1	138	1.7	54	3.5	9	0	70	0	15	1.7	13	0	74	0	135	0	2	1.7	63	3.5	38	1.8	B	2.8									
17	1.7	78	2.8	139	0	55	0	10	1.2	71	0	16	1.7	14	2.2	75	0	136	3.4	3	1.7	64	3.5	39	1.8	Q307										
18	1.6	79	0	140	0	56	1.6	11	0	72	0	17	1.7	15	0.3	76	0	137	0	4	3.5	IC603		40	4.3	E	2.5									
19	1.6	80	3.5	141	0	57	1.7	12	3.5	73	0	18	1.6	16	3.6	77	0	138	0	5	1.4	1	7.8	41	0	C	4.4									
20	1.6	81	1.9	142	0	58	1.7	13	0	74	3.5	19	3.4	17	3.4	78	0.5	139	0	6	1.7	2	7.8	42	2.0	B	3.1									
21	1.4	82	1.0	143	0	59	1.7	14	1.0	75	3.5	20	3.5	18	3.6	79	3.4	140	3.4	7	---	3	0.3	43	2.1	Q310										
22	1.3	83	0	144	0	60	---	15	0.9	76	3.5	IC311		19	3.6	80	2.6	141	3.4	8	3.5	4	0	44	3.1	E	2.1									
23	1.1	84	1.7	IC302		61	0	16	1.4	77	3.5	1	0	20	3.6	81	0	142	1.3	9	0.1	5	0.3	45	0.1	C	4.5									
24	1.4	85	3.5	1	3.5	62	0	17	0.6	78	3.4	2	3.0	21	0	82	3.3	143	0	10	0.6	6	3.9	46	2.2	B	2.8									
25	1.7	86	0	2	3.5	63	3.5	18	0	79	1.7	3	1.4	22	0	83	0	144	3.4	11	0	7	0.1	47	3.4	Q311										
26	1.5	87	0	3	3.5	64	3.4	19	1.6	80	2.2	4	3.0	23	0	84	0.1	145	3.3	12	0.9	8	3.4	48	1.7	E	2.0									
27	0	88	---	4	3.5	65	1.6	20	0.7	81	2.3	5	1.4	24	3.6	85	3.3	146	---	13	0.2	9	0.1	IC701		C	4.5									
28	3.5	89	1.7	5	1.7	66	0	21	0.7	82	0	6	3.0	25	0	86	0.5	147	0	14	0.3	10	3.4	1	0	B	2.6									
29	1.6	90	1.7	6	3.5	67	1.7	22	0.6	83	3.3	7	1.5	26	3.4	87	1.4	148	0	15	0	11	---	2	0	Q611										
30	1.6	91	0	7	3.5	68	0	23	2.8	84	3.3	8	0	27	3.6	88	0	149	3.3	16	---	12	3.3	3	---	E	1.5									
31	1.8	92	0	8	3.5	69	3.5	24	1.5	85	3.3	9	0.9	28	1.6	89	0	150	3.3	17	0.4	13	3.4	4	1.2	C	4.3									
32	1.7	93	3.5	9	3.5	70	3.5	25	0.7	86	---	10	0	29	1.6	90	1.8	151	1.8	18	0.1	14	3.3	5	1.2	B	2.0									
33	1.7	94	---	10	---	IC304		26	3.4	87	0	11	1.4	30	1.5	91	1.0	152	2.4	19	1.7	15	0	6	0	Q617										
34	1.8	95	---	11	---	1	3.4	27	0.2	88	0	12	---	31	0	92	3.3	153	0	20	3.1	16	14.9	7	0	E	1.3									
35	1.8	96	2.5	12	---	2	0	28	0	89	0	13	1.3	32	1.4	93	1.4	154	0	21	---	17	7.4	8	0	C	4.3									
36	1.7	97	0	13	1.6	3	---	29	3.5	90	0	14	3.5	33	3.6	94	1.2	155	3.3	22	3.5	18	7.4	9	0	B	1.8									
37	1.7	98	1.0	14	1.7	4	0	30	3.5	91	1.6	15	1.1	34	3.6	95	1.5	156	3.3	23	0	19	0	10	0	Q703										
38	1.7	99	3.1	15	1.5	5	0	31	0	92	1.2	16	1.6	35	0.4	96	1.2	157	1.9	24	0	20	14.9	11	0	E	0									
39	0	100	0	16	1.8	6	1.7	32	3.5	93	0	17	1.4	36	0.2	97	1.3	158	3.3	25	3.5	IC605		12	0	C	3.3									
40	0	101	0.2	17	1.4	7	0	33	3.5	94	0	18	3.5	37	0	98	1.1	159	3.3	26	3.4	1	0	13	0	B	0									
41	0	102	0.3	18	1.4	8	3.5	34	3.5	95	0	19	0	38	0	99	1.4	160	3.4	27	0.1	2	1.8	14	4.5											
42	0	103	3.4	19	1.5	IC305		35	0	96	3.4	20	3.5	39	3.4	100	0	161	3.3	28	0.1	3	1.9	IC702		1	0									
43	0	104	3.4	20	0.9	1	---	36	0	97	3.4	IC312		40	0	101	0	162	3.3	29	3.2	4	1.5	1	0											
44	---	105	---	21	3.5	2	3.5	37	0	98	3.5	1	3.4	41	1.6	102	3.3	163	3.3	30	3.2	5	1.9	2	0											
45	0	106	0	22	---	3	3.4	38	0	99	---	2	1.8	42	1.8	103	3.3	164	3.3	31	3.4	6	4.3	3	---											
46	1.7	107	3.4	23	---	4	3.4	39	---	100	3.4	3	1.6	43	1.3	104	0.2	165	0	32	3.4	7	0.1	4	1.2											
47	---	108	1.7	24	1.7	5	0	40	3.5	IC309		4	1.7	44	1.3	105	3.3	166	0	33	3.4	8	---	5	1.2											
48	---	109	3.4	25	1.7	6	1.1	41	0	1	2.5	5	1.7	45	0	106	0	167	0	34	0	9	---	6	0											
49	---	110	1.3	26	1.7	7	0	42	0	2	1.6	6	2.2	46	1.3	107	0.1	168	0	35	1.5	10	3.4	7	0											
50	3.2	111	3.3	27	1.7	8	3.4	43	0	3	1.6	7	1.5	47	1.3	108	1.5	169	0	36	1.8	11	3.4	8	0											
51	0	112	1.9	28	---	IC307		44	0	4	8.1	8	0.7	48	3.4	109	3.3	170	0	37	0.4	12	0	9	0											

EVF C.B.A.
(A,B)

MODE PIN NO.	CAMERA
IC901	
1	2.0
2	4.5
3	2.0
4	0
5	2.0
6	0.6
7	0
8	4.2
9	3.7
10	0
11	1.8
12	4.4
13	2.6
14	1.9
15	1.8
16	2.2
Q906	
E	0
C	5.9
B	0.5
Q907	
E	2.9
C	-29.6
B	2.3
TP901	3.7
TP902	4.2

COLOR EVF C.B.A.(C)

MODE PIN NO.	CAMERA
IC301	
1	4.5
2	2.0
3	0
4	4.5
5	0
6	3.5
7	0
8	3.5
9	3.5
10	0
11	0
12	0
13	1.8
14	7.0
15	0
16	6.9
17	6.9
18	6.9
19	13.9
20	3.0
21	0
22	7.2
23	7.2
24	7.2
25	7.2
26	7.2
27	7.2
28	7.2
29	3.1
30	7.2
31	7.2
32	4.3
33	3.9
34	0.6
35	3.8
36	0
37	0
38	0
39	2.3
40	0
41	0
42	3.2
43	0
44	0
45	4.3
46	4.3
47	0
48	3.3
49	2.2
50	3.2
51	0
52	0
53	0
54	0
55	0
56	0
57	0
58	2.7
59	2.7
60	2.6

MODE PIN NO.	CAMERA
61	3.3
62	3.5
63	0
64	0
IC902	
1	0
2	0
3	4.3
4	4.3
5	4.5
IC904	
1	0
2	4.1
3	0
4	0.2
5	4.5
Q901	
S	0
D	2.7
G	1.2
Q902	
E	0
C	12.8
B	-0.8
Q904	
1	13.9
2	14.1
3	4.5
4	4.0
5	4.6
Q905	
E	14.8
C	13.9
B	14.1
Q907	
E	1.2
C	0
B	0.6
Q909	
E	0
C	0.6
B	0.7
TP901	6.9
TP902	7.0
TP903	7.0
TP904	3.9
TP905	2.9

LCD C.B.A.

MODE PIN NO.	CAMERA
IC1201	
1	1.2
2	1.2
3	1.5
4	0
5	0
6	0
7	0
8	0.3
9	6.2
10	1.5
11	6.4
12	0.2
13	0
14	6.7
15	6.4
16	0.2
17	---
18	0
19	1.5
20	1.7
21	1.2
22	1.2
23	3.1
24	0.2
25	6.7
26	2.4
27	1.6
28	1.2
29	0
30	1.2
31	1.2
32	1.7
IC9002	
1	5.0
2	14.1
3	5.0
4	5.3
5	10.0
IC9010	
1	2.2
2	2.1
3	3.8
4	3.7
5	3.7
6	---
7	---
8	---
9	---
10	3.6
11	2.4
12	2.2
13	2.4
14	2.2
15	0
16	2.2
17	0.2
18	0
19	0
20	0
21	2.2

MODE PIN NO.	CAMERA
22	0.7
23	0.2
24	0.1
25	3.0
26	1.9
27	0
28	1.2
29	1.2
30	1.2
31	0.6
32	0
33	0
34	0.8
35	1.6
36	0
37	0.2
38	2.5
39	2.5
40	1.9
41	3.2
42	3.4
43	---
44	3.4
45	4.5
46	2.5
47	2.5
Q1201	
E	6.7
C	6.6
B	0
Q1202	
E	6.7
C	6.7
B	0
Q1203	
E	0
C	0
B	0.7
Q1204	
E	0
C	0
B	0.7
Q1205	
E	6.7
C	4.6
B	6.2
Q1206	
E	6.7
C	0.4
B	6.4
Q1207	
E	6.7
C	0
B	6.4
Q1209	
E	15.0
C	15.5
B	15.5
Q1210	
E	3.4

MODE PIN NO.	CAMERA
C	3.6
B	4.0
Q1211	
E	7.3
C	12.1
B	8.0
Q1212	
E	0
C	8.0
B	0.6
Q1213	
E	0
C	1.3
B	0
Q1214	
G	3.3
S	0
D	0
Q1215	
E	0
C	3.2
B	0
Q1216	
E	3.6
C	0
B	3.0
Q1218	
E	3.6
C	15.6
B	3.4
Q1219	
E	2.5
C	1.5
B	5.0
Q1220	
G	0
S	0
D	3.4
Q1221	
E	1.9
C1	3.6
C2	4.0
B1	2.5
B2	2.5
Q9001	
E	0.1
C	5.2
B	0.2
Q9002	
E	0.1
C	5.2
B	0.2
Q9010	
E	0
C	1.9
B	0
Q9014	
E1	0
C1	0
B1	1.0
E2	3.0

MODE PIN NO.	CAMERA
C2	0
B2	0
Q9016	
E1	0
C1	0
B1	1.8
E2	3.0
C2	0
B2	0
TP1201	4.5
TP1202	5.0
TP1203	15.0
TP1204	3.3
TP1205	0
TP1206	7.4
TP1207	0
TP9001	0
TP9002	2.4
TP9003	2.4
TP9004	2.4
TP9005	0.1
TP9006	0

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C

CCD C.B.A.

MODE PIN NO.	CAMERA
IC601	
1	-7.5
2	-7.5
3	0
4	0
5	---
6	0
7	0
8	14.9
9	0
10	5.8
11	0
12	0.3
13	2.4
14	1.9
Q601	
E	2.4
C	14.9
B	0

MAIN C.B.A. (POWER SUPPLY/VIDEO/AUDIO SECTION)

MODE PIN NO.	REC	PLAY
IC1001		
1	0	0
2	1.6	1.6
3	1.2	1.2
4	1.2	1.2
5	6.0	6.0
6	1.2	1.2
7	1.2	1.2
8	1.6	1.6
9	1.4	1.4
10	0.2	0.2
11	6.5	6.5
12	6.8	6.8
13	2.8	2.8
14	6.8	6.8
15	2.2	2.2
16	6.5	6.5
17	6.4	6.4
18	0.3	0.3
19	0.3	0.3
20	6.4	6.4
21	6.3	6.3
22	1.7	1.7
23	6.8	6.8
24	1.6	1.6
25	6.2	6.2
26	6.2	6.2
27	0.4	0.4
28	0	0
29	1.5	1.5
30	1.2	1.2
31	1.2	1.2
32	0.8	0.8
33	0.8	0.8
34	1.5	1.5
35	0	0
36	0	0
37	6.8	6.8
38	2.4	2.4
39	0	0
40	0	0
41	---	---
42	0	0
43	---	---
44	0.9	0.9
45	1.6	1.5
46	2.4	2.4
47	1.6	1.6
48	2.3	2.3
IC2001		
1	2.2	2.6
2	---	---
3	4.0	0.1
4	0.1	0.1
5	2.1	2.1
6	4.4	4.4
7	2.1	1.8
8	0	0
9	2.1	2.1
10	2.1	2.1
11	0.3	1.1

MODE PIN NO.	REC	PLAY
12	0	2.0
13	1.4	2.2
14	2.0	2.5
15	3.8	2.1
16	0	2.2
17	2.1	2.7
18	2.1	2.7
19	2.4	3.3
20	2.1	1.2
21	2.1	2.1
22	3.0	2.7
23	3.7	2.0
24	3.1	3.0
25	2.8	3.0
26	0	0
27	3.1	3.7
28	4.4	4.4
29	2.7	2.7
30	0	1.9
31	2.4	2.3
32	3.6	3.5
33	0	0
34	3.3	3.3
35	4.4	4.4
36	2.4	2.9
37	2.4	2.9
38	2.3	0.3
39	2.8	2.7
40	1.2	2.2
41	1.3	2.5
42	2.2	2.1
43	3.0	3.0
44	0	3.0
45	0.1	0.1
46	2.6	2.4
47	3.2	2.9
48	0.3	0.3
49	2.0	1.8
50	2.0	1.8
51	2.0	2.0
52	4.4	4.6
53	2.2	2.2
54	0	0
55	2.8	2.8
56	3.5	3.5
57	4.4	4.4
58	2.9	2.9
59	0	0
60	2.6	2.6
61	0.4	0.5
62	0	0
63	4.4	4.4
64	4.4	4.4
IC2002		
1	2.2	2.6
2	---	---
3	4.0	0.1
4	0.1	0.1
5	2.1	2.1
6	4.4	4.4
7	2.1	1.8

MODE PIN NO.	REC	PLAY
8	0	0
9	2.1	2.1
10	2.1	2.1
11	0.3	1.1
12	0	2.0
13	1.4	2.2
14	2.0	2.5
IC2003		
1	2.2	2.6
2	---	---
3	4.0	0.1
4	0.1	0.1
5	2.1	2.1
6	4.4	4.4
7	2.1	1.8
8	0	0
9	2.1	2.1
10	2.1	2.1
11	0.3	1.1
12	0	2.0
13	1.4	2.2
14	2.0	2.5
IC3001		
1	2.2	2.6
2	---	---
3	4.0	0.1
4	0.1	0.1
5	2.1	2.1
6	4.4	4.4
7	2.1	1.8
8	0	0
9	2.1	2.1
10	2.1	2.1
11	0.3	1.1
12	0	2.0
13	1.4	2.2
14	2.0	2.5
15	3.8	2.1
16	0	2.2
17	2.1	2.7
18	2.1	2.7
19	2.4	3.3
20	2.1	1.2
21	2.1	2.1
22	3.0	2.7
23	3.7	2.0
24	3.1	3.0
25	2.8	3.0
26	0	0
27	3.1	3.7
28	4.4	4.4
29	2.7	2.7
30	0	1.9
31	2.4	2.3
32	3.6	3.5
33	0	0
34	3.3	3.3
35	4.4	4.4
36	2.4	2.9
37	2.4	2.9
38	2.3	0.3

MODE PIN NO.	REC	PLAY
39	2.8	2.7
40	1.2	2.2
41	1.3	2.5
42	2.2	2.1
43	3.0	3.0
44	0	3.0
45	0.1	0.1
46	2.6	2.4
47	3.2	2.9
48	0.3	0.3
49	2.0	1.8
50	2.0	1.8
51	2.0	2.0
52	4.4	4.6
53	2.2	2.2
54	0	0
55	2.8	2.8
56	3.5	3.5
57	4.4	4.4
58	2.9	2.9
59	0	0
60	2.6	2.6
61	0.4	0.5
62	0	0
63	4.4	4.4
64	4.4	4.4
65	0.2	1.8
66	---	---
67	0	0
68	3.5	3.6
69	2.0	3.7
70	4.5	4.5
71	4.5	4.5
72	1.7	2.1
73	2.0	2.9
74	0	0.1
75	0.2	0.1
76	2.2	2.6
77	0.2	0.1
78	0	0
79	2.5	2.9
80	2.1	2.3
IC3002		
1	2.2	2.2
2	0	0
3	4.4	4.4
4	2.6	2.6
5	0	0
6	2.4	2.4
7	1.6	1.6
8	2.6	2.6
9	4.4	4.4
10	0	0
11	2.2	2.8
12	2.4	2.4
13	2.6	2.6
14	0	0
15	2.3	2.5
16	4.4	4.4
17	0	0
18	2.4	2.5

MODE PIN NO.	REC	PLAY
19	2.4	2.4
20	2.2	2.2
IC4001		
1	2.2	2.2
2	2.2	2.2
3	---	---
4	2.2	2.2
5	0	0
6	0	1.3
7	1.6	1.6
8	0.1	0.1
9	2.2	2.2
10	4.5	3.8
11	4.1	0
12	2.2	2.2
13	0	4.4
14	2.2	2.2
15	0.1	0.1
16	0	0
17	0	0
18	2.8	2.8
19	0	0
20	0	0
21	---	---
22	0	0
23	0	0
24	1.6	1.6
25	0.4	0.4
26	1.6	1.6
27	4.5	4.5
28	1.7	1.7
29	4.5	4.5
30	1.7	1.7
31	2.2	2.2
32	2.2	2.2
IC4003		
1	4.1	4.1
2	0	0
3	4.1	4.1
4	4.1	4.1
5	8.1	8.1
Q1001		
E	6.9	6.9
C	6.8	6.8
B	0	0
Q1002		
E	3.0	3.0
C	3.0	3.0
B	0.4	0.4
Q1003		
E	2.2	2.2
C	0	0
B	1.6	1.6
Q1004		
E	2.4	2.4
C	0.8	0.8
B	2.9	2.9
Q1005		
E	6.8	6.8
C	4.6	4.6
B	6.3	6.3

MODE PIN NO.	REC	PLAY
Q1006		
E	6.8	6.8
C	3.6	3.6
B	6.4	6.4
A	0	0
Q1007		
E	6.8	6.8
C	0.4	0.4
B	6.5	6.5
Q1008		
E	6.8	6.8
C	4.6	4.6
B	6.4	6.4
A	0	0
Q1009		
E	6.8	6.8
C	2.2	2.2
B	6.3	6.3
A	0	0
Q1010		
E	5.2	5.2
C	0	0
B	5.1	5.1
Q1011		
E1	6.3	6.3
C1	2.4	2.4
B1	1.9	1.9
E2	4.8	4.8
C2	2.4	2.4
B2	1.9	1.9
Q1012		
E	5.4	5.9
C	4.8	4.9
B	6.2	6.6
Q1013		
E	6.9	6.9
C	4.8	4.8
B	6.3	6.3
Q1020		
E	4.6	4.6
C	0	0
B	4.6	4.6
Q1021		
E	0	0
C	4.6	4.6
B	0.1	0.1
Q1022		
E	6.9	6.9
C	4.8	4.8
B	6.3	6.3
Q1023		
E1	6.3	6.3
C1	2.4	1.8
B1	1.8	1.8
E2	4.7	4.8
C2	2.4	2.4
B2	1.8	1.8
Q1101		
E	6.9	6.9
C	6.9	1.1
B	6.2	6.8

MODE PIN NO.	REC	PLAY
Q1102		
E	0.1	0
C	0.2	6.9
B	0.8	0
Q1103		
E	3.9	0
C	0	0
B	3.9	0
Q1104		
E	0.8	0
C	0	0
B	0.8	0
Q1105		
E	0	0
C	3.9	0
B	0	0
Q1106		
E	0	0
C	0.8	0
B	0	0.5
Q1107		
E	0	0
C	0	0.5
B	3.9	0
Q3003		
E	4.3	2.6
C	0	1.5
B	3.9	1.9
Q3004		
E	3.2	1.8
C	3.3	3.7
B	4.0	2.6
Q3005		
E	2.7	3.1
C	4.4	4.4
B	3.3	3.7
Q3021		
E	0.9	0.9
C	4.4	4.4
B	1.5	1.5
Q3022		
E	1.6	0
C	4.4	4.4
B	2.3	0.4
Q3026		
E	2.7	2.8
C	0	0
B	2.2	2.3
Q3027		
E	1.5	1.5
C	4.4	4.4
B	2.1	2.1
Q3028		
E	1.9	1.9
C	4.6	4.6
B	2.5	2.5
Q3029		
E	1.8	0
C	4.5	4.6
B	2.5	2.5
Q4002		

MODE PIN NO.	REC	PLAY
E	4.5	4.5
C	15.0	4.4
B	4.4	3.8
Q4003		
E	6.4	0
C	0	0
B	15.2	0.7
Q4004		
E	6.4	0
C	0	0
B	15.2	0.7
Q4007		
E	0	0
C	0.1	0.1
B	0	0.1
Q4008		
E	0	0
C	3.9	0
B	0.3	0
Q4009		
E	3.6	0
C	3.8	4.5
B	4.2	0
Q4010		
E	4.5	4.5
C	4.4	0
B	3.8	4.5
Q4011		
E	0.1	1.3
C	4.5	4.5
B	0.2	1.8
Q4013		
E	5.1	0.8
C	0	0
B	4.4	0.2
Q4014		
E	1.7	1.7
C	4.5	4.5
B	2.2	2.2
TP1001	4.5	4.5
TP1002	4.5	4.5
TP1003	14.9	14.9
TP1004	8.1	8.1
TP1005	8.1	8.1
TP1006	3.6	3.6
TP1007	4.5	4.5
TP3001	2.6	2.6
TP3002	2.7	2.7
TP3003	0.2	1.8
TP3004	2.9	2.9
TP3005	3.1	3.6
TP3006	2.3	0.4
TP4001	2.1	2.1
TP4002	0	0
TP4003	0	0
TP4004	0	1.3
TP4005	0	0

MAIN C.B.A. (SYSTEM CONTROL / SERVO SECTION)

MODE PIN NO.	STOP	REC	PLAY	FF	REW
IC2001					
1	3.6	2.1	2.1	2.0	3.6
2	0	0.6	0.6	0.6	0
3	0.2	0.6	0.6	0.6	0
4	2.9	3.0	3.0	3.0	2.9
5	0	0	0	0	0
6	0	0	0	0	0
7	4.5	0	0	0	2.3
8	2.2	2.2	2.2	2.3	2.2
9	2.3	2.2	2.2	2.3	2.2
10	2.2	2.2	2.2	2.3	2.3
11	2.3	2.2	2.2	2.3	2.3
12	2.3	2.2	2.2	2.3	2.2
13	2.2	2.2	2.2	2.3	4.5
14	4.5	4.5	4.5	4.5	0
15	0	1.8	1.8	1.8	0
16	0	1.8	1.8	1.8	0
17	0	1.8	1.8	1.8	0
18	0.7	0.4	0.4	0.4	0.7
19	0.7	0.3	0.3	0.4	0.7
20	0.7	0.3	0.3	0.4	0.7
21	4.7	4.1	4.0	4.0	4.2
22	4.8	4.0	4.0	3.9	4.2
23	1.8	4.0	4.0	4.0	4.2
24	0	0.4	0.4	4.0	4.5
25	0	0.4	0.4	0.5	0.4
26	0	0.4	0.4	0.5	0.5
27	0.8	1.9	1.9	4.0	3.2
28	3.6	1.9	1.9	4.0	3.2
29	3.6	1.9	1.9	4.0	3.1
30	1.1	0.9	0.9	2.2	1.7
31	0	0.9	0.9	2.2	1.8
32	0	0.9	0.9	2.2	1.7
33	4.0	2.0	2.0	4.4	3.6
34	2.2	1.5	1.5	2.2	2.2
35	2.2	1.5	1.5	2.2	2.2
36	1.7	1.5	1.5	1.7	1.7
37	1.7	1.5	1.5	1.7	1.7
38	1.2	1.5	1.5	1.2	1.2
39	1.2	1.5	1.5	1.2	1.2
40	2.2	0	0	0.1	4.4
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
44	4.1	2.3	2.3	2.1	2.2
45	0.2	0.7	0.7	0.6	0.6
46	2.3	0.6	0.6	0.6	0.6
47	0.2	0.2	0.2	0.2	0.2
48	2.3	1.9	1.9	1.9	2.0
49	6.8	4.8	4.8	3.1	3.9
50	2.2	2.1	2.1	2.2	2.2
51	0	0	0	0	0
52	4.5	4.5	4.5	4.5	4.5
53	0.7	2.1	2.1	2.1	0.7
54	---	---	---	---	---
55	0.7	0.8	0.8	0.8	0.7
56	0	0	0	0	0
57	2.2	2.2	2.2	2.2	2.2
58	2.2	2.2	2.2	2.2	2.2
59	2.2	2.2	2.2	2.2	2.2
60	2.2	2.2	2.2	2.2	2.2

MODE PIN NO.	STOP	REC	PLAY	FF	REW
61	2.2	2.2	2.2	2.2	2.2
62	3.7	2.1	2.1	0	0
63	1.1	2.1	2.1	1.2	1.5
64	3.6	2.2	2.2	2.0	3.6
IC2002					
1	1.0	1.0	1.0	1.0	1.0
2	1.8	1.8	1.8	1.8	1.8
3	1.0	1.0	1.0	1.0	1.0
4	1.8	1.8	1.8	1.8	1.8
5	1.1	1.1	1.0	1.1	1.1
6	1.8	1.8	1.8	1.8	1.8
7	2.1	2.1	2.1	2.1	2.1
8	1.0	1.0	1.0	1.0	1.0
9	0.4	0.4	0.4	0.4	0.4
10	1.0	1.0	1.0	1.0	1.0
11	0.4	0.4	0.4	0.4	0.4
12	1.0	1.0	1.0	1.0	1.0
13	0.4	0.4	0.4	0.4	0.4
14	0.1	0.1	0.1	0.1	0.1
IC2003					
1	1.9	1.9	1.9	1.9	1.9
2	4.0	4.0	4.0	4.0	4.0
3	1.9	1.9	1.9	1.9	1.9
4	4.0	4.0	4.0	4.0	4.0
5	1.9	1.9	1.9	1.9	1.9
6	4.0	4.0	4.0	4.0	4.0
7	4.5	4.5	4.5	4.5	4.5
8	1.8	1.8	1.9	1.9	1.9
9	0.4	0.4	0.4	0.4	0.4
10	1.9	1.9	1.9	1.9	1.9
11	0.4	0.4	0.4	0.4	0.4
12	1.9	1.9	1.9	1.9	1.9
13	0.4	0.4	0.4	0.4	0.4
14	0	0	0	0	0
IC6001					
1	4.5	4.5	4.5	0	4.5
2	4.5	4.5	4.5	0.4	4.5
3	0	4.6	4.6	4.6	0
4	4.6	0	0	0	0
5	2.0	1.9	0.9	1.0	2.1
6	4.5	4.5	4.5	4.5	4.5
7	0.1	0.1	0.1	0.1	0.1
8	0.1	0.1	0.1	0.1	0.1
9	4.5	4.5	4.5	4.5	4.5
10	4.5	4.5	0.1	4.5	4.5
11	4.6	4.6	4.6	4.6	4.6
12	2.0	0	1.5	0	1.5
13	0.1	0.1	0.1	0	6.1
14	4.5	4.5	4.5	4.5	4.5
15	4.5	4.5	4.5	4.5	4.5
16	4.5	4.5	4.5	4.5	4.5
17	4.5	4.4	4.4	4.5	4.5
18	0.1	0.1	0.1	0.1	0.1
19	4.5	0.1	0.1	0.1	4.5
20	4.5	4.5	0.1	0.1	0.1
21	2.3	0.1	0.1	0.1	4.5
22	0.1	0	0.1	0.1	0.1
23	0.1	2.3	2.3	2.3	0
24	0.1	0.1	0.1	0.1	0.1
25	4.5	4.5	4.5	4.5	4.5
26	0	4.5	0	0.1	0.1

MODE PIN NO.	STOP	REC	PLAY	FF	REW
27	0	4.4	0	0.1	0.1
28	0	0	0	0	0
29	4.5	0	4.5	4.5	4.5
30	0	0.3	0.3	0.3	0
31	4.5	4.5	4.5	4.5	4.5
32	4.5	4.5	0	4.5	4.5
33	2.3	2.0	2.0	1.9	2.1
34	3.7	2.0	0	0	3.6
35	---	---	---	---	---
36	4.5	4.5	4.5	4.5	4.5
37	2.3	2.3	2.3	2.3	2.3
38	2.3	2.3	2.3	2.3	2.3
39	0	0	0	0	---
40	0.8	0.8	0.8	0.8	0.8
41	---	---	---	---	---
42	4.5	4.5	4.5	4.6	0
43	4.6	4.5	0	4.6	4.6
44	4.5	4.5	0	4.5	4.5
45	0	0	0	0	0
46	---	---	---	---	---
47	4.5	4.5	4.5	4.5	4.5
48	0	0	0	0	0
49	4.6	4.5	0	4.5	4.5
50	2.1	2.6	0	2.1	2.1
51	4.5	4.5	4.5	4.6	4.5
52	2.2	2.2	0	2.1	2.2
53	2.3	2.3	2.3	2.3	2.3
54	4.5	4.5	4.5	4.5	0
55	0	0	0	0	0
56	4.5	0	0.1	4.5	4.5
57	0	0	0	0.1	0
58	0.1	0	0	0.1	0.1
59	0.1	0	0	0.1	0.1
60	0.1	0.1	0	0	0.1
61	0.1	0.1	0	0.1	0.1
62	4.5	4.5	4.5	4.5	4.5
63	0.1	0.1	0.1	0.1	0.1
64	0	0.1	0.1	0.1	0.1
65	0.8	2.2	2.2	2.2	0.8
66	0.7	0.8	0.8	0.8	0.7
67	2.3	2.3	2.3	2.3	2.3
68	2.3	2.3	2.3	2.3	2.3
69	2.3	2.3	2.3	2.3	2.3
70	2.3	2.3	2.3	2.3	2.3
71	0	0	0	0	0
72	2.3	0	2.2	1.4	2.2
73	4.5	4.5	4.5	4.5	4.5
74	2.2	2.7	2.2	2.2	2.2
75	2.2	1.9	2.2	2.2	2.2
76	0	0	2.2	2.3	2.2
77	0	0	0	4.2	4.2
78	4.6	0	4.6	4.6	0
79	2.6	2.6	2.6	2.6	2.6
80	1.2	0	0	2.0	0
81	4.6	0	4.6	4.6	4.6
82	4.6	0	0	0	0
83	0	0	0	0	0
84	4.6	0	4.6	4.6	4.6
85	4.4	0	4.4	4.4	4.4
86	4.3	0	4.4	4.3	3.9
87	0	0	0	0	0

MODE PIN NO.	STOP	REC	PLAY	FF	REW
88	0	0	0.1	0.1	0.1
89	0	0	3.5	1.8	0.8
90	2.8	0	0	3.0	3.5
91	0	0	0	2.3	0.1
92	4.5	0	0	4.5	4.5
93	0.4	0	0.4	0.4	0.4
94	4.5	0	0	4.5	4.5
95	0	4.5	4.5	4.5	4.5
96	4.5	4.5	4.5	4.5	4.5
97	4.5	0	4.5	0.1	4.5
98	0	2.3	0	2.3	4.5
99	0	4.5	4.5	0.1	0.1
100	0	0	0	0	0
IC6002					
1	4.4	4.4	4.4	4.4	4.4
2	4.2	4.5	4.5	4.2	4.2
3	---	---	---	---	---
4	4.4	0	0	4.4	4.4
IC6005					
1	1.0	1.0	1.0	1.0	1.0
2	0.8	0.8	0.8	0.8	0.8
3	0.8	0.8	0.8	0.8	0.4
4	0	0	0	0	0
5	0.4	0.4	0.4	0.4	0.4
6	4.4	4.4	4.4	4.4	4.4
7	4.1	4.1	4.1	4.1	4.1
8	4.2	4.2	4.2	4.2	4.2
IC6006					
1	0	0	0	0	0
2	6.6	6.5	6.5	6.5	6.6
3	4.6	4.6	4.6	4.6	4.6
IC6007					
1	0	0	0	0	0
2	0	0	0	0	0
3	1.9	1.9	2.0	2.0	2.0
4	6.6	6.5	6.5	6.5	6.6
5	6.6	6.5	6.5	6.4	6.6
6	0	0.1	0.1	0.1	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0.1	0	0
12	4.6	4.6	4.6	4.6	4.6
13	0	0	0	0	0
14	1.9	1.9	2.0	2.0	2.0
15	0	0	0	0	0
16	0	0	0	0	0
IC6201					
1	0.3	0.3	0.3	0.3	0.3
2	2.1	2.2	2.2	2.2	2.2
3	1.9	2.2	2.2	2.2	2.2
4	0	0	0	0	0
5	0.5	2.2	2.2	2.2	2.2
6	0.5	2.2	2.2	2.2	2.2
7	0.5	2.2	2.2	2.2	2.2
8	4.5	4.5	4.5	4.5	4.5
IC6202					
1	0	1.9	1.9	1.8	1.9
2	0	0	0	0	0
3	0	0	0	0	0

MODE PIN NO.	STOP	REC	PLAY	FF	REW
4	0	0	0	0	0
5	4.5	4.4	4.4	4.4	4.5
6	0.1	1.9	1.9	1.8	1.9
7	0.3	0.3	0.3	0.3	0.3
8	4.5	4.5	4.5	4.5	4.5
IC6203					
1	0	0	0	0	0
2	1.2	1.2	1.2	1.2	1.2
3	0	0	0	0	0
4	2.1	0	0	3.0	0
Q6001					
E	0	4.3	0	0	0
C	0.9	4.3	0.9	0.9	0.9
B	0	0	0	0	0
Q6004					
E	4.5	4.5	4.5	4.5	4.5
C	0	4.4	0	0	0
B	4.5	3.7	4.5	4.5	4.5
Q6005					
E	0	0	0	0	0
C	4.5	0	4.5	4.5	4.5
B	0	4.4	0	0	0
Q6006					
E	6.8	6.8	6.8	6.8	6.8
C	4.8	4.8	4.8	4.8	4.8
B	6.3	6.3	6.3	6.3	6.3
Q6007					
E1	6.3	6.3	6.3	6.3	6.3
C1	4.8	4.8	4.8	4.8	4.8
B1	4.6	4.6	4.6	4.6	4.6
E2	6.3	6.3	6.3	6.3	6.3
C2	4.1	4.1	4.1	4.1	4.1
B2	4.5	4.5	4.5	4.5	4.5
Q6008					
E	0	0	0	0	0
C	4.5	0	4.5	4.5	4.5
B	0	4.4	0	0	0
Q6009					
E	4.4	4.3	0	4.4	4.4
C	4.2	4.3	0.9	4.2	4.2
B	2.2	0	0	2.2	2.2
Q6010					
E	0	0	0	0	0
C	0	0	0.1	0	0
B	4.5	4.5	4.5	4.5	4.5
Q6011					
E	4.6	4.5	4.6	4.6	4.6
C	-1.0	0	1.0	-0.8	-1.0
B	4.6	3.9	4.6	4.6	4.6
Q6012					
G	0	0	0	0	0
S	0	0	0	0	0
D	4.4	4.4	4.4	4.4	4.4
Q6013					
E	0.2	0.2	0.4	2.1	0.2
C	6.6	5.9	6.5	6.4	6.6
B	0.1	0	0.3	2.3	0.1
Q6018					
E	1.0	1.0	1.0	0.5	0.2
C	4.1	4.1	4.1	4.1	4.1

MODE PIN NO.	STOP	REC	PLAY	FF	REW
B	0.1	0.1	0.1	0.1	0.1
Q6021					
E	6.8	6.8	6.8	6.8	6.9
C	6.6	6.8	6.9	6.8	6.8
B	5.9	6.1	6.2	6.1	6.1
Q6022					
E	0	0	0	0	0
C	0	0	0	0	0
B	0.6	0.6	0.6	0.6	0.6
Q6026					
E	6.6	6.8	6.8	6.8	6.8
C	6.6	6.8	6.8	6.6	6.8
B	2.8	2.9	2.9	2.9	2.9
Q6035					
E	4.5	4.5	4.5	4.5	4.5
C	3.6	3.5	3.6	3.5	3.6
B	2.3	2.2	2.3	2.3	2.3
Q6201					
E	4.5	4.5	4.5	4.5	4.5
C	4.5	4.5	4.5	4.5	4.5
B	3.8	3.8	3.8	3.8	3.8
Q6202					
E	0	0	0	0	0
C	0	0	0	0	0
B	0.6	0.6	0.6	0.6	0.6
TP6001	1.0	1.0	1.0	1.0	1.0
TP6003	0	0	0	0	0
TP6004	0.3	3.7	3.8	2.1	2.1
TP6006	4.4	4.4	4.4	4.4	4.4
TP6007	1.8	3.1	3.1	2.1	2.1
TP6010	4.5	4.5	4.5	4.5	4.5
TP6011	4.5	0	4.5	4.5	4.5
TP6012	4.5	4.5	4.5	4.5	4.5
TP6014	4.4	4.4	4.4	4.4	4.4
TP6015	4.4	4.4	4.4	4.4	4.4
TP6020	4.4	3.8	4.4	4.4	4.4
TP6021	3.0	3.0	3.0	3.0	3.0
TP6022	3.0	3.0	3.0	3.0	3.0
TP6201	2.2	2.2	2.2	2.2	2.2
TP6202	2.3	2.2	2.2	2.2	2.2
TP6205	2.2	2.2	2.2	2.2	2.2
TP6206	2.3	2.2	2.2	2.2	2.2
TP6207	2.3	2.3	2.3	2.3	2.3
TP6208	0.7	0.8	0.8	2.2	0.7
TP6210	2.2	2.2	2.2	2.2	2.2
TP6212	0	1.8	1.9	3.0	0
TP6215	4.5	0.1	0	0	4.5
TP6216	4.3	4.3	0	4.3	4.3
TP6220	1.0	1.0	1.0	1.0	1.0

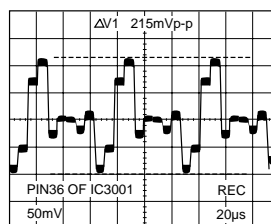
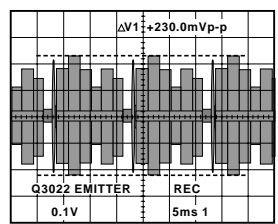
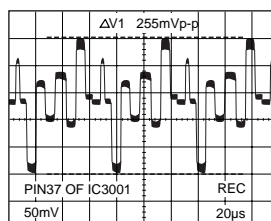
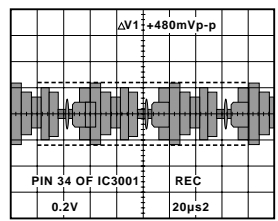
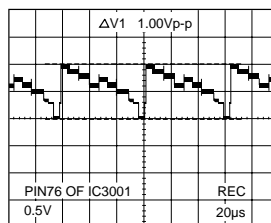
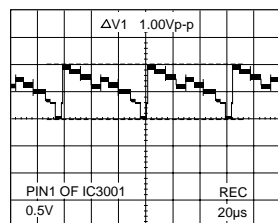
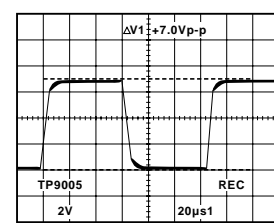
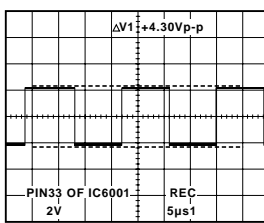
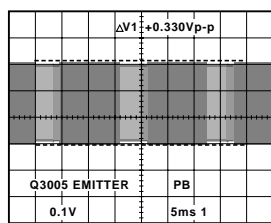
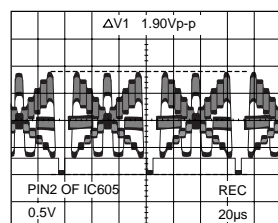
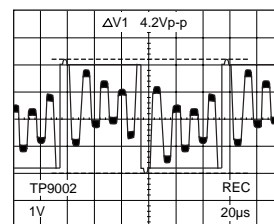
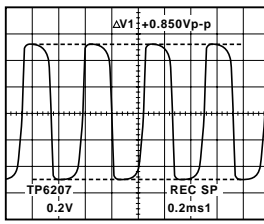
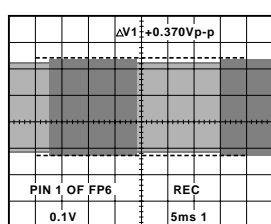
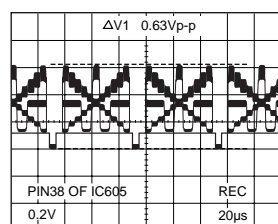
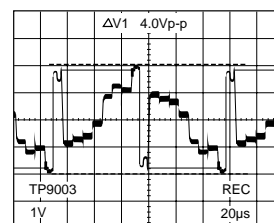
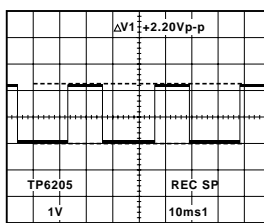
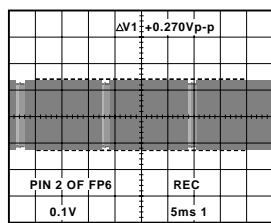
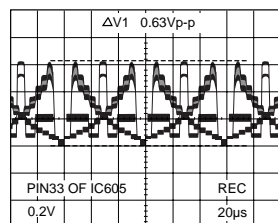
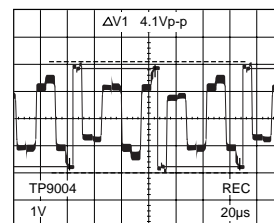
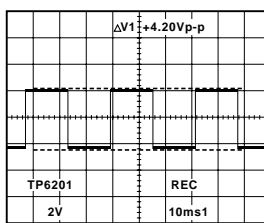
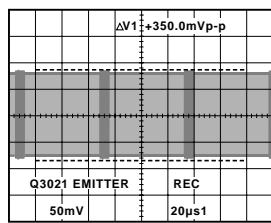
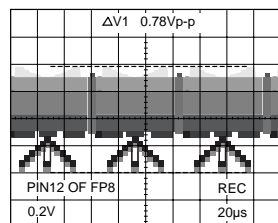
SIGNAL WAVEFORM

MAIN C.B.A.

NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

LCD C.B.A.



CIRCUIT BOARD LAYOUT

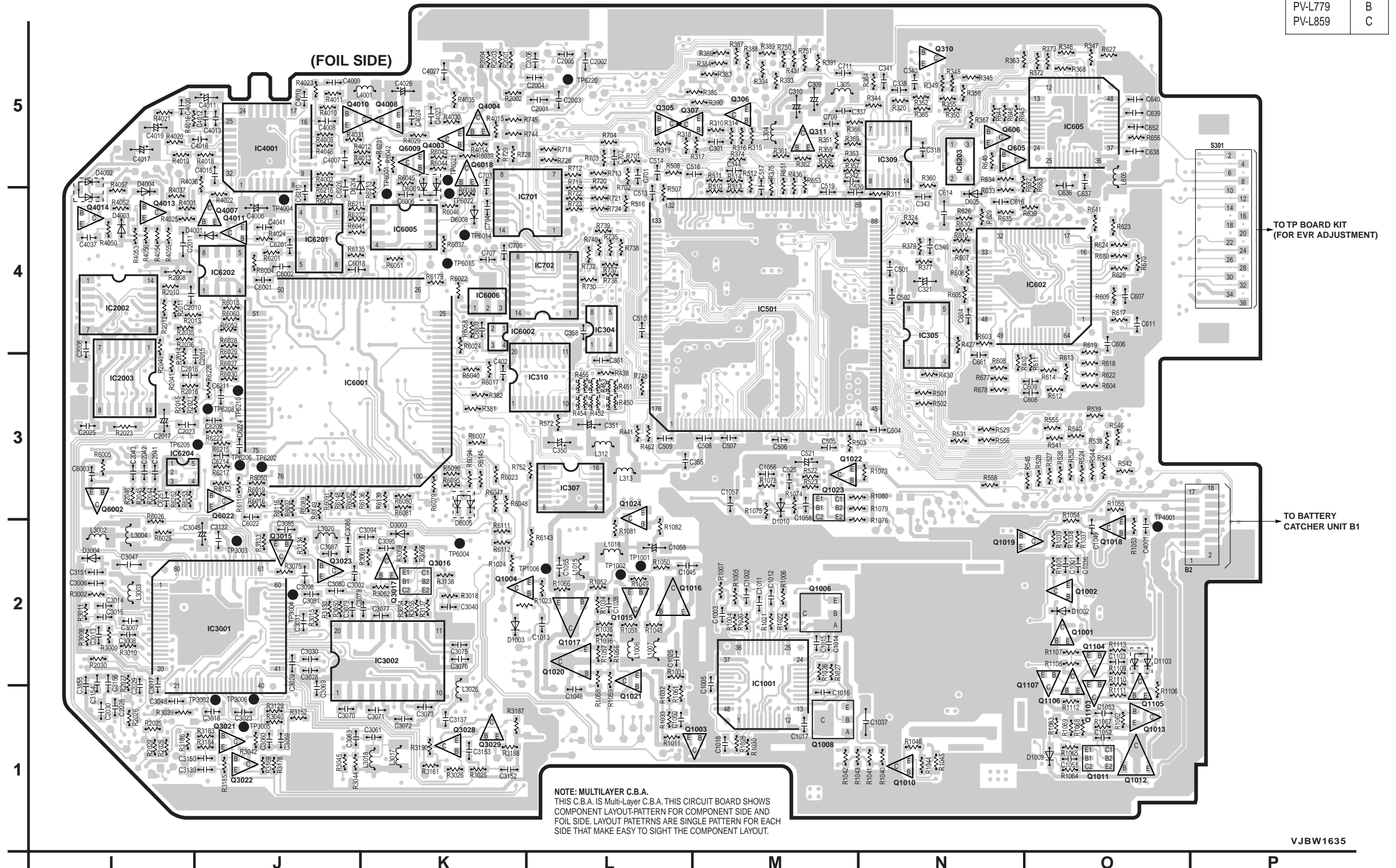
MAIN C.B.A. VEPW1635A1 (A) / VEPW1635B1 (B) / VEPW1635C1 (C)

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

COMPARISON CHART
OF MODELS & MARKS


MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C



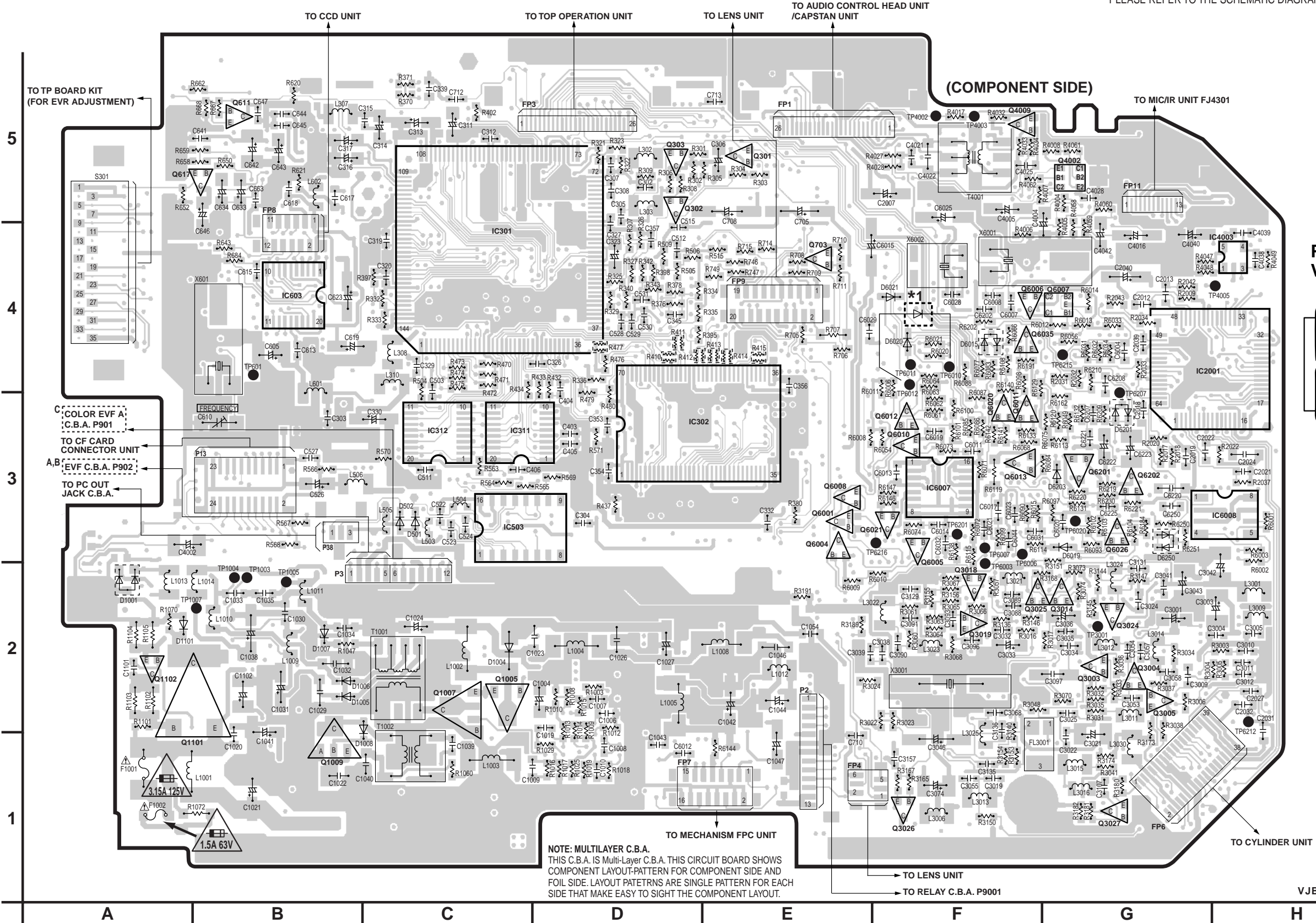
MAIN C.B.A. VEPW1635A1 (A) / VEPW1635B1 (B) / VEPW1635C1 (C)

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 3.15A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCENDIE N'UTILISER QUE DES FUSIBLE DE MÊME
TYPE 3.15A 125V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 1.5A 63V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCENDIE N'UTILISER QUE DES FUSIBLE DE MÊME
TYPE 1.5A 63V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

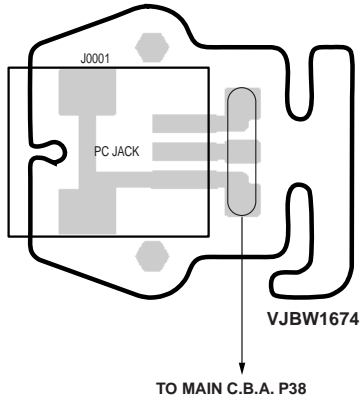
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.
NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.



COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C

PC OUT JACK C.B.A.
VEPW1674A1



NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS
COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND
FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH
SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPONENT PARTS LOCATION GUIDE

MAIN C.B.A.

MAIN	
TRANSISTOR	
Q1001	O-2
Q1002	O-2
Q1003	M-1
Q1004	K-2
Q1005	C-2
Q1006	M-2
Q1007	C-2
Q1008	M-1
Q1009	B-1
Q1010	N-1
Q1011	O-1
Q1012	O-1
Q1013	O-1
Q1015	L-2
Q1016	L-2
Q1017	L-2
Q1018	O-2
Q1019	O-2
Q1020	L-2
Q1021	L-2
Q1101	B-2
Q1102	A-2
Q1103	O-1
Q1104	O-2
Q1105	O-1
Q1106	O-2
Q1107	O-2
Q3003	G-2
Q3004	G-2
Q3005	G-2
Q301	L-5
Q3014	G-2
Q3015	J-2
Q3016	K-2
Q3017	K-2
Q3018	F-2
Q3019	F-2
Q302	L-4
Q3021	J-1
Q3022	J-1
Q3023	J-2
Q3024	G-2
Q3025	F-2
Q3026	F-1
Q3027	G-1

MAIN	
TRANSISTOR	
Q3028	K-1
Q3029	K-1
Q303	D-5
Q305	M-4
Q306	M-5
Q307	M-5
Q310	M-4
Q311	M-4
Q4002	G-5
Q4003	K-5
Q4004	K-5
Q4007	J-4
Q4008	K-5
Q4009	F-5
Q4010	J-5
Q4011	J-4
Q4013	I-4
Q4014	I-4
Q6001	E-3
Q6002	I-3
Q6004	E-3
Q6006	F-4
Q6007	G-4
Q6008	E-3
Q6009	K-5
Q6010	F-3
Q6011	F-3
Q6012	F-3
Q6013	F-3
Q6018	K-5
Q6020	F-3
Q6021	F-3
Q6022	J-3
Q6026	G-3
Q6035	F-4
Q605	N-5
Q606	N-5
Q607	B-3
Q611	B-5
Q617	B-5
Q6201	G-3
Q6202	G-3
Q703	M-4

MAIN	
IC	
IC1001	M-2
IC2001	G-4
IC2002	I-4
IC2003	I-3
IC3001	J-2
IC3002	K-2
IC301	C-4
IC305	N-4
IC307	D-3
IC308	M-4
IC309	M-5
IC4001	J-5
IC4003	H-4
IC6001	J-3
IC6002	K-4
IC6005	K-4
IC6006	K-4
IC6007	F-3
IC6008	H-3
IC602	O-4
IC603	B-4
IC605	O-5
IC6201	J-4
IC6202	J-4
IC6203	N-5
IC6204	I-3
IC701	L-4
IC702	L-4

MAIN	
CONNECTOR	
B2	P-2
FP1	E-5
FP11	G-5
FP3	D-5
FP4	E-1
FP6	G-1
FP7	E-1
FP8	B-4
FP9	E-4
P2	E-1
P3	C-3
S301	A-5
S301	O-5

MAIN	
TEST POINT	
TP1001	L-2
TP1002	L-2
TP1002	B-2
TP1003	B-2
TP1004	B-2
TP1005	B-2
TP1006	L-2
TP1007	B-2
TP3001	G-2
TP3002	J-1
TP3003	J-2
TP3004	J-2
TP3005	J-1
TP3006	J-1
TP4001	O-2
TP4002	F-5
TP4003	F-5
TP4004	J-4
TP4005	H-4
TP6001	K-4
TP6003	F-2
TP6004	K-2
TP6006	F-3
TP6007	F-3
TP601	B-4
TP6010	F-4
TP6011	F-4
TP6012	F-4
TP6014	K-4
TP6015	K-4
TP6020	G-3
TP6021	K-5
TP6022	K-4
TP6201	F-3
TP6202	J-3
TP6205	J-3
TP6206	J-3
TP6207	G-3
TP6208	J-3
TP6210	J-3
TP6212	H-2
TP6215	G-4
TP6216	F-3
TP6218	F-3
TP6220	L-5

LEADLESS COMPONENT PARTS LOCATION GUIDE

MAIN C.B.A.


Q3002	E-5	Q6012	F-3	L3012	G-2	R377	N-4	R540	O-3	R709	E-4	R1047	B-2	R2042	G-4	R3169	J-1	R6015	F-3	R6112	K-2	C339	C-5	C647	B-5	C2004	L-5	C3068	F-2	C6009	K-4
Q3003	D-5	Q6018	K-5	L3014	G-2	R379	N-4	R542	O-3	R711	E-4	R1049	L-2	R2044	I-3	R3174	G-1	R6017	K-3	R6114	F-3	C341	N-5	C661	N-3	C2006	L-5	C3070	J-1	C6012	D-1
Q3005	L-5	Q6020	F-3	L3015	G-1	R380	E-3	R543	O-3	R712	L-5	R1050	L-2	R2045	I-3	R3176	J-1	R6018	J-4	R6115	F-3	C342	M-5	C663	B-5	C2007	F-5	C3071	K-1	C6013	F-3
Q3006	M-5	Q6021	E-3	L3016	G-1	R381	K-3	R544	O-3	R713	L-5	R1051	L-2	R2046	I-3	R3180	G-1	R6019	J-3	R6116	J-3	C350	L-3	C701	L-5	C2008	I-3	C3072	K-1	C6014	F-3
Q3007	L-5	Q6022	J-3	L3017	K-1	R382	K-3	R545	O-3	R714	E-4	R1052	L-2	R3002	I-2	R3181	G-1	R6020	F-4	R6119	F-3	C351	L-3	C702	L-5	C2010	I-4	C3073	K-1	C6015	F-4
Q3010	N-4	Q6026	G-3	L3018	K-1	R383	M-5	R546	O-3	R715	E-4	R1053	O-2	R3003	H-2	R3182	G-1	R6021	F-4	R6120	G-3	C353	D-3	C703	K-5	C2011	I-4	C3074	F-1	C6017	F-3
Q3011	M-5	Q6035	F-4	L3020	J-2	R384	M-5	R555	O-3	R718	L-5	R1054	O-3	R3004	H-2	R3183	J-1	R6022	K-4	R6129	F-4	C354	D-3	C704	K-4	C2012	G-4	C3075	K-2	C6018	J-4
Q6005	N-5	Q6201	G-3	L3021	F-2	R385	M-5	R556	N-3	R719	L-5	R1055	O-3	R3005	H-2	R3184	J-1	R6023	K-3	R6131	G-3	C355	L-3	C705	E-5	C2013	G-4	C3076	K-2	C6019	F-3
Q6006	N-5	Q6202	G-3	L3022	F-2	R386	M-5	R558	N-3	R720	L-5	R1056	L-2	R3006	G-2	R3185	J-1	R6024	K-4	R6132	G-3	C356	E-4	C706	K-4	C2015	J-3	C3077	K-2	C6020	G-3
Q611	B-5	D501	C-3	L3023	F-2	R387	M-5	R563	D-3	R721	L-4	R1057	L-2	R3008	I-2	R3186	I-1	R6025	I-2	R6133	F-3	C358	L-4	C707	K-4	C2016	I-3	C3078	K-2	C6021	F-3
Q617	A-5	D502	C-3	L3024	G-2	R388	M-5	R564	C-3	R722	L-4	R1058	L-1	R3009	I-2	R3187	K-1	R6026	I-3	R6135	J-4	C343	N-4	C708	E-5	C2017	I-3	C3079	J-2	C6022	J-2
Q703	E-4	D605	N-4	L3025	F-1	R389	M-5	R565	D-3	R723	L-4	R1059	L-1	R3010	I-2	R3188	K-1	R6027	J-3	R6136	K-3	C344	M-5	C710	E-1	C2018	G-3	C3080	J-2	C6023	F-3
Q1001	O-2	D1001	A-2	L3026	K-1	R390	M-5	R566	B-3	R724	L-4	R1060	C-1	R3011	I-2	R3189	E-2	R6028	J-4	R6138	F-3	C345	D-4	C709	M-5	C2019	G-3	C3081	J-2	C6025	F-5
Q1002	O-2	D1002	O-2	L3030	G-1	R391	M-5	R567	B-3	R726	L-5	R1061	L-1	R3015	J-2	R3190	K-1	R6029	J-3	R6139	K-3	C346	N-4	C712	C-5	C2021	H-3	C3085	J-2	C6028	F-4
Q1003	L-1	D1003	K-2	L4001	J-5	R393	M-5	R568	B-3	R728	K-5	R1062	O-1	R3016	F-2	R3191	E-2	R6030	J-3	R6140	F-4	C359	M-3	C713	E-5	C2022	G-3	C3086	J-2	C6029	E-4
Q1004	K-2	D1004	C-2	R301	D-5	R394	M-5	R569	D-3	R729	K-5	R1063	O-1	R3017	G-2	R4001	I-4	R6031	G-4	R6141	F-3	C361	L-3	C1001	O-2	C2023	I-3	C3087	J-2	C6031	F-3
Q1005	C-2	D1005	B-2	R302	D-5	R395	E-4	R570	C-3	R730	L-4	R1064	O-1	R3018	K-2	R4002	J-5	R6032	G-4	R6142	F-3	C402	K-3	C1002	M-2	C2024	H-3	C3088	F-2	C6032	F-3
Q1006	M-2	D1006	B-2	R303	E-5	R397	C-4	R571	D-3	R732	L-4	R1065	O-1	R3022	F-1	R4004	G-5	R6033	G-4	R6143	L-2	C403	D-3	C1003	M-2	C2025	I-3	C3089	F-2	C6044	F-3
Q1007	C-2	D1007	B-2	R304	E-5	R398	D-4	R572	L-3	R734	N-3	R1066	L-2	R3023	F-2	R4005	G-4	R6034	G-4	R6144	E-1	C404	D-3	C1004	D-2	C2027	H-2	C3090	F-2	C6201	J-4
Q1008	M-1	D1008	B-1	R305	E-5	R402	C-5	R603	N-4	R735	L-4	R1067	O-1	R3024	E-2	R4006	F-4	R6037	K-4	R6145	K-3	C405	D-3	C1005	M-1	C2028	I-1	C3091	F-2	C6202	F-4
Q1009	B-1	D1009	O-1	R306	D-5	R410	D-4	R604	O-3	R736	L-4	R1068	O-1	R3025	K-1	R4007	G-5	R6038	K-4	R6146	F-3	C406	C-3	C1006	D-2	C2029	I-1	C3093	F-2	C6207	G-3
Q1010	N-1	D1010	M-3	R307	D-4	R411	D-4	R605	N-4	R737	L-4	R1069	O-1	R3026	K-1	R4008	G-5	R6039	K-5	R6147	F-3	C501	N-4	C1007	D-2	C2030	I-1	C3094	K-2	C6208	G-4
Q1011	O-1	D1101	A-2	R308	D-4	R412	D-4	R606	N-4	R738	L-4	R1070	A-2	R3031	G-2	R4009	J-5	R6040	K-3	R6148	J-3	C502	N-4	C1008	D-1	C2031	H-2	C3095	K-2	C6209	J-3
Q1012	O-1	D1103	O-2	R309	D-5	R413	E-4	R607	N-4	R739	L-4	R1072	B-1	R3032	G-2	R4010	J-5	R6041	J-4	R6149	J-3	C503	C-4	C1009	C-1	C2032	H-2	C3096	F-2	C6210	J-4
Q1013	O-1	D3003	K-2	R310	M-5	R414	E-4	R608	N-3	R740	L-4	R1073	N-3	R3033	G-2	R4011	J-5	R6042	K-5	R6152	J-3	C504	N-3	C1010	D-1	C2039	G-4	C3097	G-2	C6211	J-3
Q1015	L-2	D3004	I-2	R314	M-5	R415	E-4	R609	O-4	R743	N-3	R1074	M-3	R3034	G-2	R4012	J-5	R6043	K-5	R6162	G-3	C505	M-3	C1011	M-2	C2040	G-4	C3098	J-2	C6214	J-3
Q1016	L-2	D4001	I-4	R315	M-5	R427	N-4	R610	N-3	R744	K-5	R1075	M-3	R3035	G-2	R4013	J-5	R6044	K-5	R6179	K-4	C506	M-3	C1012	M-2	C2041	I-3	C3107	G-1	C6220	G-3
Q1017	L-2	D4002	I-5	R316	M-5	R432	D-4	R611	O-3	R745	K-5	R1076	N-3	R3036	G-2	R4014	K-5	R6045	K-5	R6184	G-3	C507	M-3	C1013	L-2	C2042	I-3	C3129	F-2	C6221	G-3
Q1018	O-2	D4003	I-4	R317	M-5	R430	N-3	R612	O-3	R746	E-4	R1078	M-3	R3037	G-2	R4015	K-5	R6046	K-4	R6191	F-4	C508	M-3	C1014	M-2	C2043	I-3	C3131	G-2	C6222	G-3
Q1019	O-2	D4004	I-4	R318	L-5	R431	M-5	R613	O-3	R747	E-4	R1079	N-3	R3038	G-2	R4016	I-5	R6047	K-3	R6201	J-4	C509	L-3	C1015	M-2	C3001	G-2	C3132	J-2	C6223	G-3
Q1020	L-2	D6001	K-4	R319	L-5	R433	D-4	R614	O-3	R748	L-3	R1080	N-3	R3039	I-1	R4017	F-5	R6048	K-3	R6202	F-4	C510	L-4	C1016	M-1	C3002	J-2	C3135	F-1	C6224	J-3
Q1021	L-1	D6005	K-3	R320	N-5	R434	C-4	R615	N-4	R749	E-4	R1081	L-2	R3040	J-1	R4018	J-5	R6049	G-3	R6209	G-3	C511	C-3	C1017	M-1	C3003	H-2	C3136	F-2	C6225	G-3
Q1022	M-3	D6008	K-4	R321	D-5	R436	M-5	R617	O-4	R750	M-5	R1082	L-2	R3041	G-1	R4019	I-5	R6050	J-3	R6210	G-4	C512	D-4	C1018	M-1	C3004	H-2	C3137	K-1	C6226	J-4
Q1023	M-3	D6015	F-4	R322	D-5	R437	D-3	R618	O-3	R751	M-5	R1101	A-2	R3042	J-1	R4020	I-5	R6051	K-4	R6211	J-4	C513	L-4	C1019	D-1	C3005	H-2	C3139	J-1	C6250	G-3
Q1024	L-3	D6019	G-3	R323	D-5	R438	L-3	R619	O-4	R752	K-5	R1102	A-2	R3044	J-1	R4021	I-5	R6052	J-4	R6212	J-4	C514	L-5	C1020	B-1	C3006	I-2	C3150	J-1	C6251	I-3
Q1101	A-1	D6020	F-4	R324	N-4	R441	L-3	R620	B-5	R1001	O-2	R1103	A-2	R3045	J-1	R4022	J-4	R6054	F-3	R6213	K-4	C515	D-5	C1021	B-1	C3007	I-2	C3151	I-2		
Q1102	A-2	D6021	F-4	R325	D-4	R450	L-3	R621	B-5	R1003	D-2	R1104	A-2	R3048	F-2	R4023	J-5	R6056	G-4	R6215	J-3	C516	M-5	C1022	B-1	C3008	I-2	C3152	K-1		
Q1103	O-1	D6201	G-3	R326	D-4	R451	L-3	R622	O-3	R1004	M-2	R1105	A-2	R3050	J-2	R4024	J-4	R6058	K-4	R6216	J-4	C517	M-5	C1023	C-2	C3009	G-2	C3153	K-1		
Q1104	O-2	D6203	G-3	R327	D-4	R452	L-3	R623	O-4	R1005	M-2	R1106	O-1	R3054	K-2	R4025	I-4	R6060	J-4	R6217	J-3	C519	M-5	C1024	C-2	C3010	H-2	C3154	I-2		
Q1105	O-1	D6204	J-4	R329	D-4	R453	L-3	R624	O-4	R1006	M-2	R1107	O-2	R3055	K-2	R4027	F-5	R6061	F-3	R6219	G-3	C520	M-5	C1025	L-2	C3011	H-2	C3155	I-2		
Q1106	O-1	D6250	G-3	R332	C-4	R454	L-3	R625	O-4	R1007	M-2	R1108	O-2	R3056	K-2	R4028	F-5	R6062	F-3	R6220	G-3	C521	M-3	C1026	D-2	C3012	H-2	C3156	I-2		
Q1107	N-1	L302	D-5	R333	C-4	R455	L-3	R626	N-4	R1008	D-2	R1109	O-2	R3057	F-2	R4029	K-3	R6063	F-4	R6221	G-3	C522	C-3	C1027	D-2	C3013	I-2	C4001	O-2		
Q3003	G-2	L303	D-5	R334	E-4	R462	L-3	R629	N-4	R1009	D-1	R1110	O-2	R3059	K-2	R4030	K-5	R6064	F-4	R6222	J-3	C523	C-3	C1028	L-2	C3014	I-2	C4002	A-3		
Q3004	G-2	L304	M-5	R335	E-4	R470	C-4	R630	N-4	R1010	D-2	R1111	O-1	R3060	F-2	R4031	J-5	R6066	F-4	R6226	J-3	C524	C-3	C1029	B-2	C3015	I-2	C4004	F-5		
Q3005	G-2	L305	M-5	R336	D-4	R471	C-4	R632	O-4	R1011	L-1	R1112	O-1	R3061	F-2	R4032	F-5	R6068	F-3	R6227	J-4	C525	M-3	C1030	B-2	C3017	I-2	C4005	F-5		
Q3014	G-2	L307	B-5	R340	D-4	R472	C-4	R633	N-4	R1012	D-2	R1113	O-2	R3062	K-2	R4033	F-5	R6071	F-3	R6230	G-3	C526	B-3	C1031	B-2	C3018	J-1	C4006	J-4		
Q3015	J-2	L308	C-4	R342	D-4	R473	C-4	R634	N-5	R1013	D-1	R2001	K-5	R3063	F-2	R4034	F-5	R6072	F-3	R6231	K-5	C527	B-3	C1032	B-2	C3019	F-1	C4007	J-5		
Q3016	K-2	L310	C-4	R343	D-4	R474	C-4	R635	N-4	R1014	D-1	R2002	K-5	R3064	F-2	R4035	K-5	R6073	F-3	R6230	G-3	C528	D-4	C1033	B-2	C3020	G-1	C4008	J-5		
Q3017	K-2	L312	L-3	R344	N-5	R475	C-4	R639	O-4	R1015	D-2	R2003	K-5	R3065	F-2	R4036	I-5	R6074	F-3	R6251	G-3	C529	D-4								

LCD C.B.A. VEPW1639B1

RELAY C.B.A. VEPW1640A1

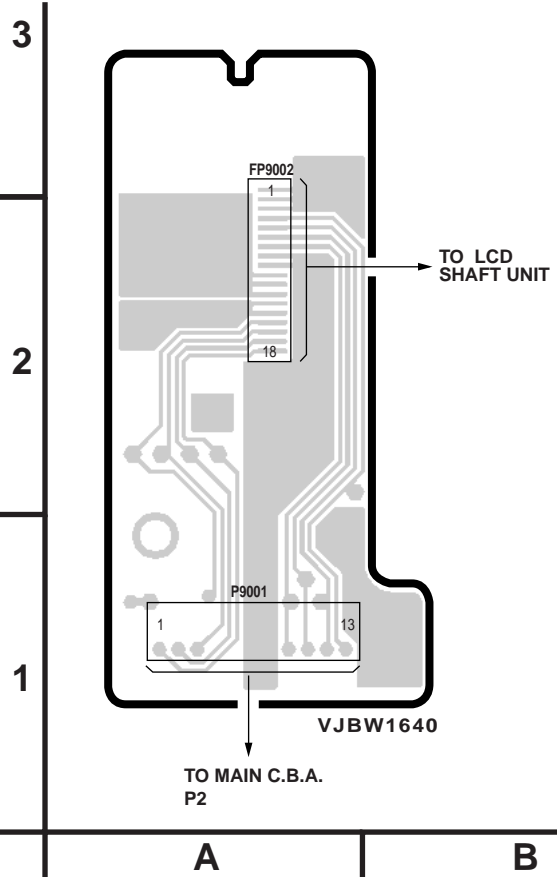
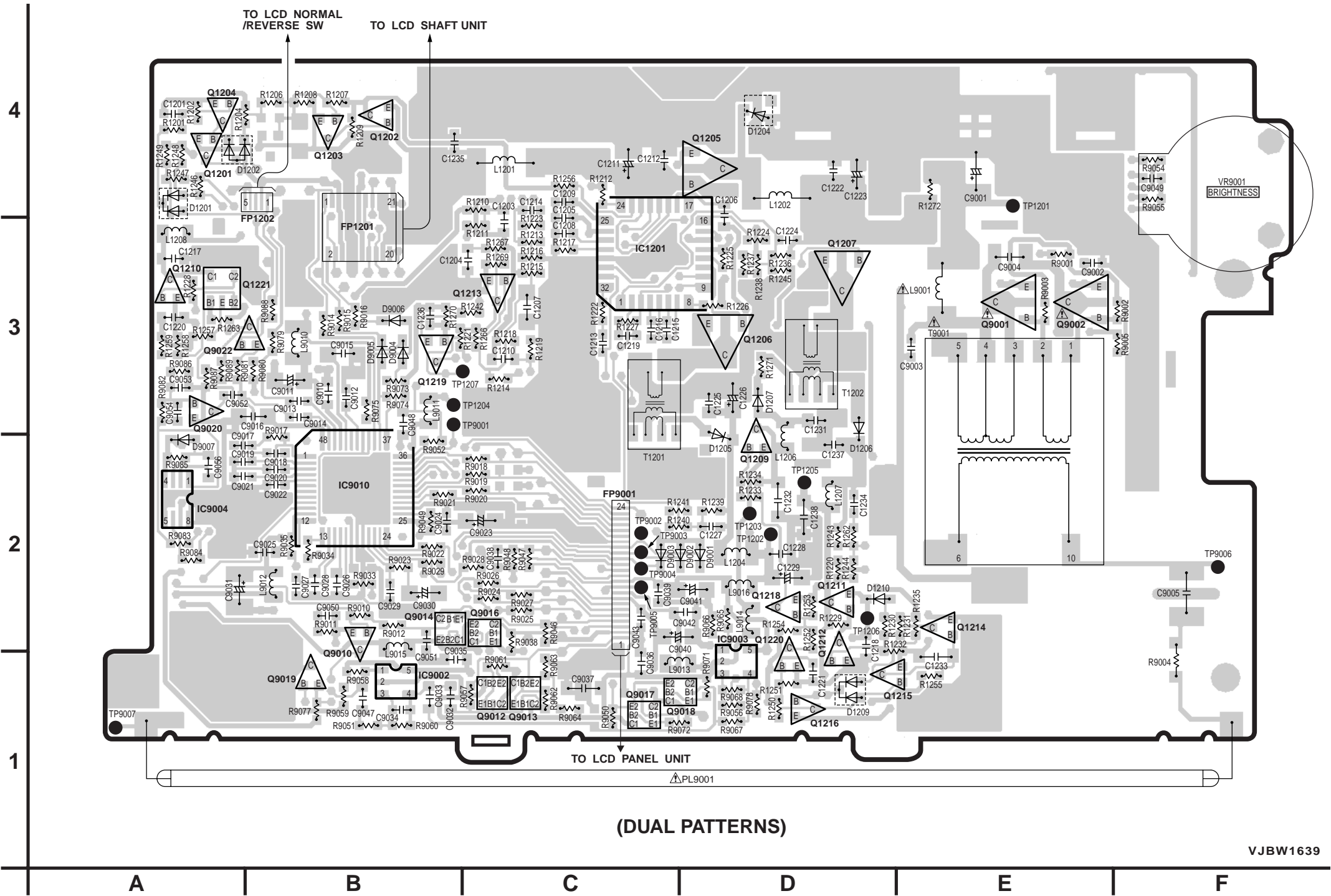
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
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USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C



VJBW1639

COMPONENT PARTS LOCATION GUIDE
LCD C.B.A.

LCD	
TRANSISTOR	
Q1201	A-4
Q1202	B-4
Q1203	B-4
Q1204	A-4
Q1205	D-4
Q1206	D-3
Q1207	D-3
Q1209	D-3
Q1210	A-3
Q1211	D-2
Q1212	D-2
Q1213	B-3
Q1214	E-2
Q1215	D-1
Q1216	D-1
Q1218	D-2
Q1219	B-3
Q1220	D-2
Q1221	B-3
Q9001	E-3
Q9002	E-3
Q9010	B-1
Q9012	C-1
Q9013	C-1
Q9014	B-2
Q9016	C-2
Q9017	C-1
Q9018	C-1
Q9019	B-1

LCD	
IC	
IC1201	C-3
IC9002	B-1
IC9003	D-2
IC9004	A-2
IC9010	B-2

LCD	
CONNECTOR	
FP1201	B-3
FP1202	A-4
FP9001	C-2

LCD	
ADJUSTMENT	
VR9001	F-4

LCD	
TEST POINT	
TP1201	E-4
TP1202	D-2
TP1203	D-2
TP1204	C-3
TP1205	D-2
TP1206	D-2
TP1207	B-3
TP9001	C-3
TP9002	C-2
TP9003	C-2
TP9004	C-2
TP9005	C-2
TP9006	F-2
TP9007	A-1

COMPARISON CHART
OF MODELS & MARKS


MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C

LEADLESS COMPONENT PARTS LOCATION GUIDE
LCD C.B.A.

Q1201	A-4	Q9019	B-1	C1212	C-4	C9003	E-3	C9035	B-1	R1213	C-3	R1241	C-2	R9002	F-3	R9047	C-2	R9079	B-3
Q1202	B-4	Q9020	A-3	C1213	C-3	C9004	E-3	C9036	C-1	R1214	C-3	R1242	C-3	R9003	E-3	R9048	C-2	R9080	B-3
Q1203	B-4	Q9022	A-3	C1214	C-4	C9005	F-2	C9037	C-1	R1215	C-3	R1243	D-2	R9004	F-1	R9049	B-2	R9081	A-3
Q1204	A-4	D1201	A-4	C1215	C-3	C9010	B-3	C9038	C-2	R1216	C-3	R1244	D-2	R9005	F-3	R9050	C-1	R9082	A-3
Q1205	D-4	D1202	A-4	C1216	C-3	C9011	B-3	C9039	C-2	R1217	C-3	R1245	D-3	R9010	B-2	R9051	B-1	R9083	A-2
Q1206	D-3	D1204	D-4	C1217	A-3	C9012	B-3	C9040	C-1	R1218	C-3	R1246	A-4	R9011	B-2	R9052	B-2	R9084	A-2
Q1207	D-3	D1205	D-2	C1218	D-1	C9013	B-3	C9041	D-1	R1219	C-3	R1247	A-4	R9012	B-2	R9054	F-4	R9085	A-2
Q1209	D-3	D1206	D-2	C1219	C-3	C9014	B-3	C9042	D-1	R1220	D-2	R1248	A-4	R9014	B-3	R9055	F-4	R9086	A-3
Q1210	A-3	D1207	D-3	C1220	A-3	C9015	B-3	C9043	C-2	R1221	C-3	R1249	A-4	R9015	B-3	R9056	D-1	R9087	A-3
Q1211	D-2	D1209	D-1	C1221	D-1	C9016	B-3	C9047	B-1	R1222	C-3	R1250	D-1	R9016	B-3	R9057	C-1	R9088	B-3
Q1212	D-2	D1210	D-2	C1222	D-4	C9017	A-2	C9048	B-3	R1223	C-3	R1251	D-1	R9017	B-3	R9058	B-1	R9089	A-3
Q1213	B-3	D9001	D-2	C1223	D-4	C9018	B-2	C9049	F-4	R1224	D-3	R1252	D-2	R9018	C-2	R9059	B-1	L1201	C-4
Q1214	E-2	D9002	D-2	C1224	D-3	C9019	A-2	C9050	B-2	R1225	D-3	R1253	D-2	R9019	C-2	R9060	B-1	L1202	D-4
Q1215	D-1	D9003	C-2	C1225	D-3	C9020	B-2	C9051	B-1	R1226	D-3	R1254	D-2	R9020	C-2	R9061	C-1	L1204	D-2
Q1216	D-1	D9004	B-3	C1226	D-3	C9021	A-2	C9052	A-3	R1227	C-3	R1255	E-1	R9021	B-2	R9062	C-1	L1207	D-2
Q1218	D-2	D9005	B-3	C1227	D-2	C9022	B-2	C9053	A-3	R1228	A-3	R1256	C-4	R9022	B-2	R9063	C-1	L1208	A-3
Q1219	B-3	D9006	B-3	C1228	D-2	C9023	C-2	C9054	A-3	R1229	D-2	R1257	A-3	R9023	B-2	R9064	C-1	L9001	E-3
Q1220	D-2	D9007	A-2	C1229	D-2	C9024	B-2	C9056	A-2	R1230	D-2	R1258	A-3	R9024	C-2	R9065	D-2	L9010	B-3
Q1221	B-3	C1201	A-4	C1231	D-3	C9025	B-2	R1201	A-4	R1231	E-2	R1259	A-3	R9025	C-2	R9066	D-2	L9011	B-3
Q9001	E-3	C1203	C-4	C1232	D-2	C9026	B-2	R1202	A-4	R1232	D-2	R1262	D-2	R9026	C-2	R9067	D-1	L9012	B-2
Q9002	E-3	C1204	B-3	C1233	E-1	C9027	B-2	R1204	A-4	R1233	D-2	R1263	A-3	R9027	C-2	R9068	D-1	L9013	C-1
Q9010	B-1	C1205	C-4	C1234	D-2	C9028	B-2	R1206	B-4	R1234	D-2	R1266	C-3	R9028	C-2	R9071	D-1	L9014	D-2
Q9012	C-1	C1206	D-4	C1235	B-4	C9029	B-2	R1207	B-4	R1235	E-2	R1267	C-3	R9029	B-2	R9072	C-1	L9015	B-1
Q9013	C-1	C1207	C-3	C1236	B-3	C9030	B-2	R1208	B-4	R1236	D-3	R1269	C-3	R9033	B-2	R9073	B-3	L9016	D-2
Q9014	B-2	C1208	C-3	C1237	D-2	C9031	A-2	R1209	B-4	R1237	D-3	R1270	B-3	R9034	B-2	R9074	B-3		
Q9016	C-2	C1209	C-4	C1238	D-2	C9032	B-1	R1210	C-4	R1238	D-3	R1271	D-3	R9035	B-2	R9075	B-3		
Q9017	C-1	C1210	C-3	C9001	E-4	C9033	B-1	R1211	C-3	R1239	D-2	R1272	E-4	R9038	C-2	R9077	B-1		
Q9018	C-1	C1211	C-4	C9002	E-3	C9034	B-1	R1212	C-4	R1240	C-2	R9001	E-3	R9046	C-2	R9078	D-1		

EVF C.B.A. VEPW1641A1 (A,B)

NOTE:
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REFER TO BEGINNING OF SCHEMATIC SECTION.

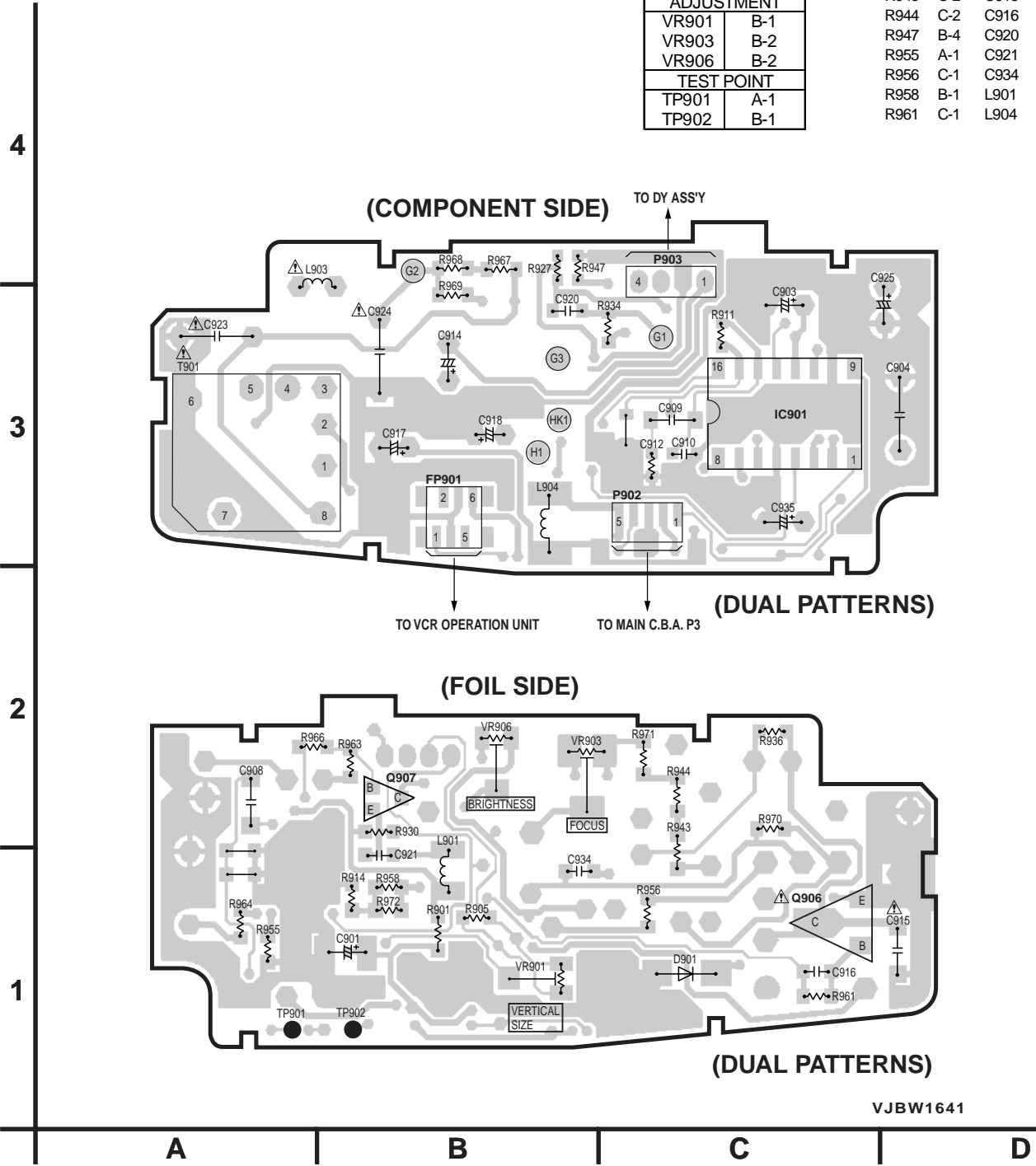
IMPORTANT SAFETY NOTICE:
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COMPONENT PARTS
LOCATION GUIDE
EVF C.B.A.

EVF	
TRANSISTOR	
Q906	C-1
Q907	B-2
IC	
IC901	C-3
CONNECTOR	
FP901	B-3
P902	C-3
P903	C-4
ADJUSTMENT	
VR901	B-1
VR903	B-2
VR906	B-2
TEST POINT	
TP901	A-1
TP902	B-1

LEADLESS COMPONENT
PARTS LOCATION GUIDE
EVF C.B.A.

Q906	C-1	R963	B-2
Q907	B-2	R964	A-1
D901	C-1	R966	A-2
R901	B-1	R967	B-4
R905	B-1	R968	B-4
R911	C-3	R969	B-3
R912	C-3	R970	C-2
R914	B-1	R971	C-2
R927	B-4	R972	B-1
R930	B-2	C908	A-2
R934	C-3	C909	C-3
R936	C-2	C910	C-3
R943	C-2	C915	D-1
R944	C-2	C916	C-1
R947	B-4	C920	B-3
R955	A-1	C921	B-1
R956	C-1	C934	B-1
R958	B-1	L901	B-2
R961	C-1	L904	B-3



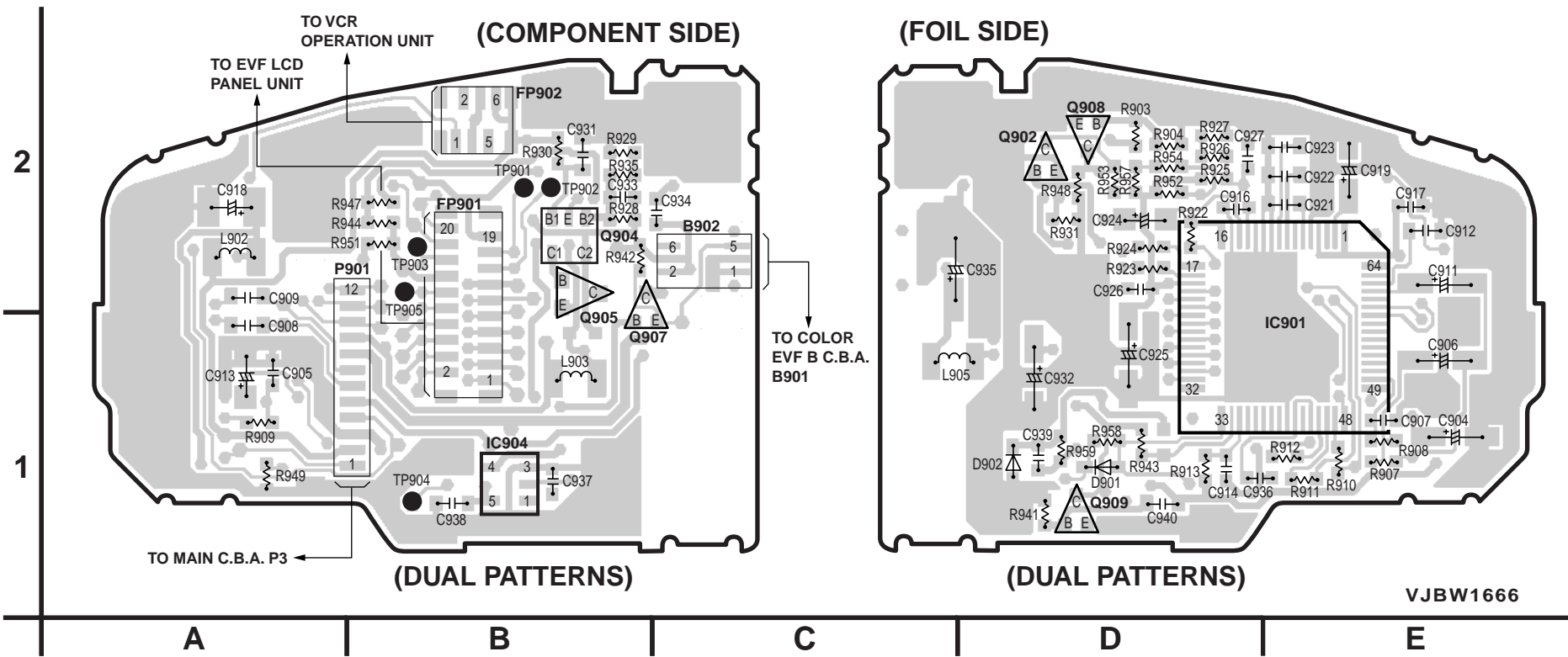
COLOR EVF A C.B.A. VEPW1666A1 (C)

NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.
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COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C



COMPONENT PARTS
LOCATION GUIDE
COLOR EVF C.B.A.

COLOR EVF	
TRANSISTOR	
Q902	D-2
Q904	B-2
Q905	B-2
Q907	B-1
Q908	D-2
Q909	D-1
IC	
IC901	E-1
IC904	B-1
CONNECTOR	
B902	C-2
FP901	B-2
FP902	B-2
P901	B-2
TEST POINT	
TP901	B-2
TP902	B-2
TP903	B-2
TP904	B-1
TP905	B-2

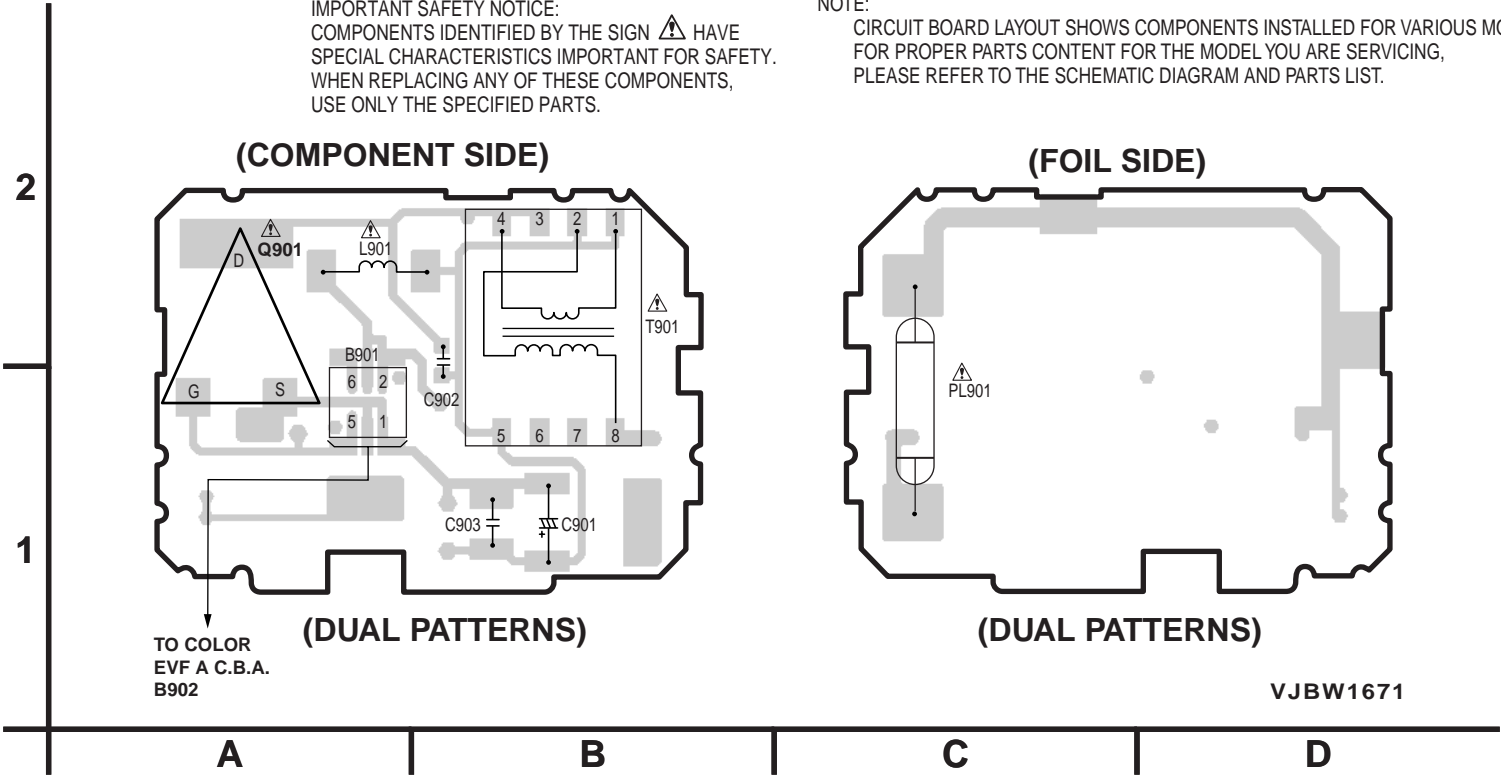
LEADLESS COMPONENT PARTS
LOCATION GUIDE
COLOR EVF C.B.A.

Q902	D-2	R928	B-2	C912	E-2
Q904	B-2	R929	B-2	C913	A-1
Q905	B-2	R930	B-2	C914	D-1
Q907	B-1	R931	D-2	C916	D-2
Q908	D-2	R935	B-2	C917	E-2
Q909	D-1	R941	D-1	C918	A-2
D901	D-1	R942	B-2	C919	E-2
D902	D-1	R943	D-1	C921	E-2
L902	A-2	R944	B-2	C922	E-2
L903	B-1	R947	B-2	C923	E-2
L905	C-1	R948	D-2	C924	D-2
R903	D-2	R949	A-1	C925	D-1
R904	D-2	R951	B-2	C926	D-2
R907	E-1	R952	D-2	C927	D-2
R908	E-1	R953	D-2	C931	B-2
R909	A-1	R954	D-2	C932	D-1
R910	E-1	R957	D-2	C933	B-2
R911	E-1	R958	D-1	C934	C-2
R912	E-1	R959	D-1	C935	D-2
R913	D-1	C904	E-1	C936	D-1
R922	D-2	C905	A-1	C937	B-1
R923	D-2	C906	E-1	C938	B-1
R924	D-2	C907	E-1	C939	D-1
R925	D-2	C908	A-1	C940	D-1
R926	D-2	C909	A-2		
R927	D-2	C911	E-2		

COLOR EVF B C.B.A. VEPW1671A1 (C)

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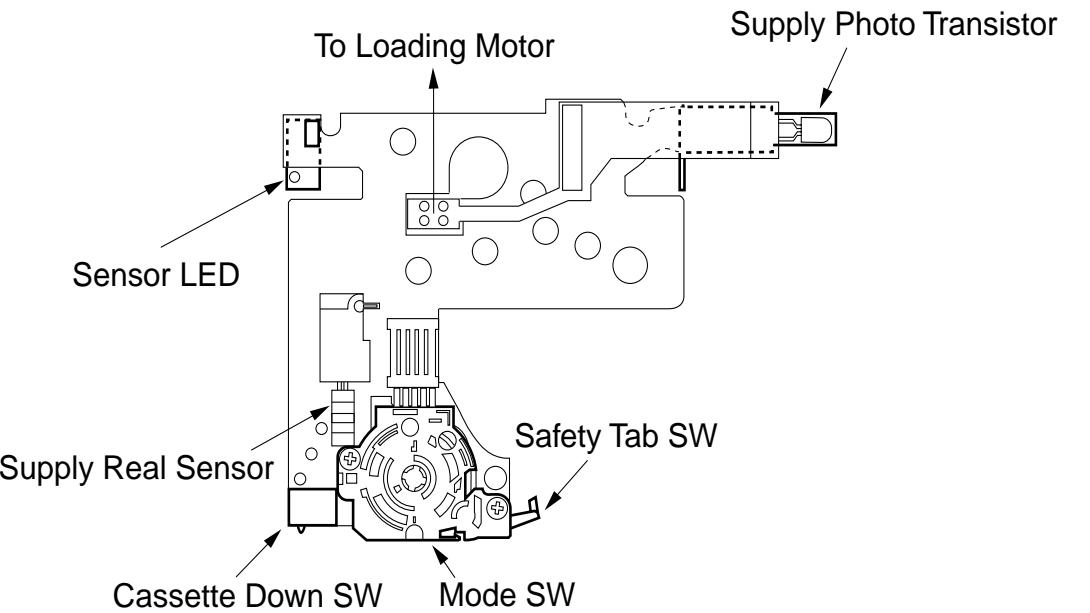
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MECHANISM FPC UNIT

“FOR REFERENCE ONLY”

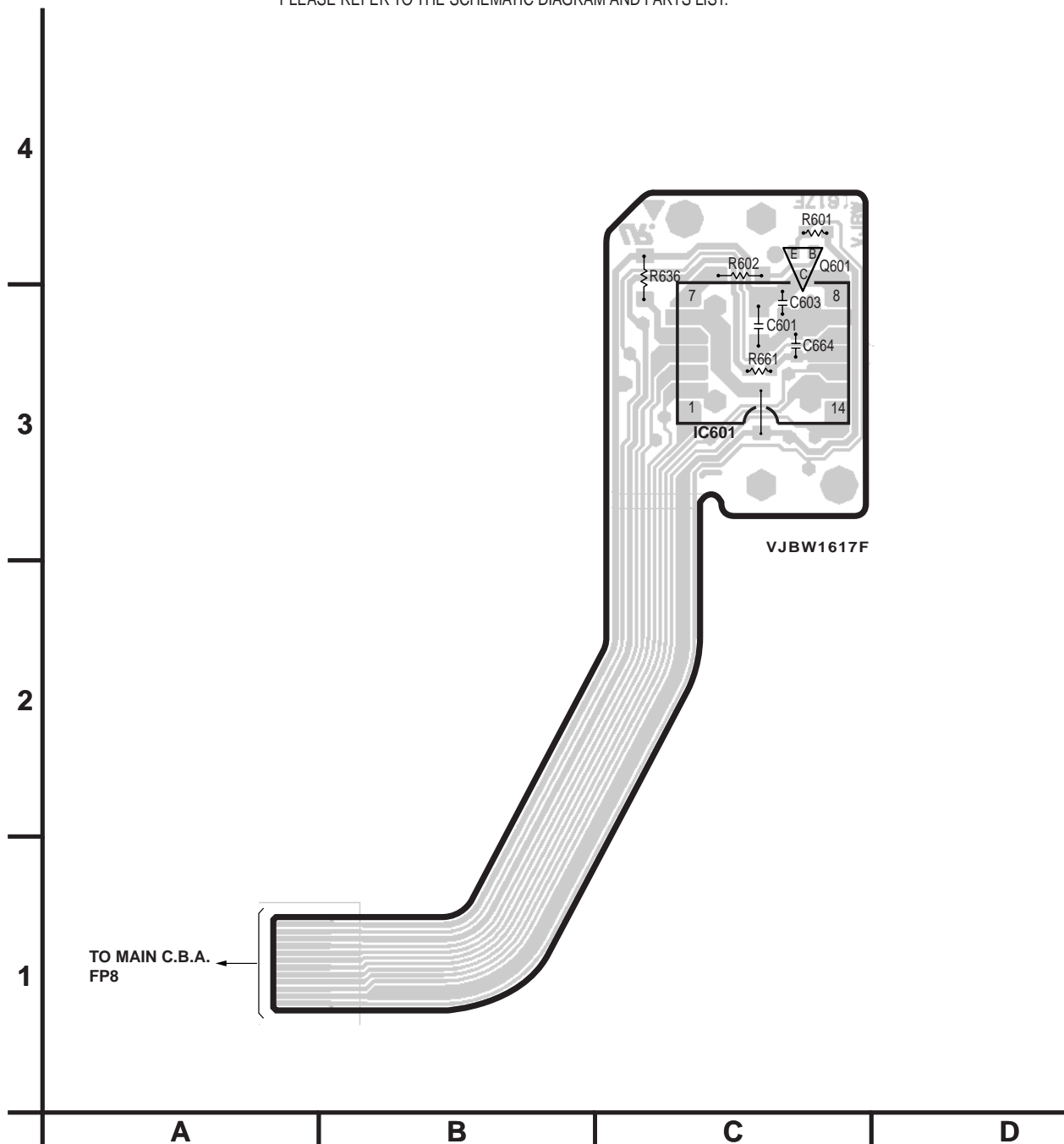
NOTE:
MECHANISM FPC UNIT IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



CCD C.B.A. VEQW0301

NOTE:
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REFER TO BEGINNING OF SCHEMATIC SECTION.

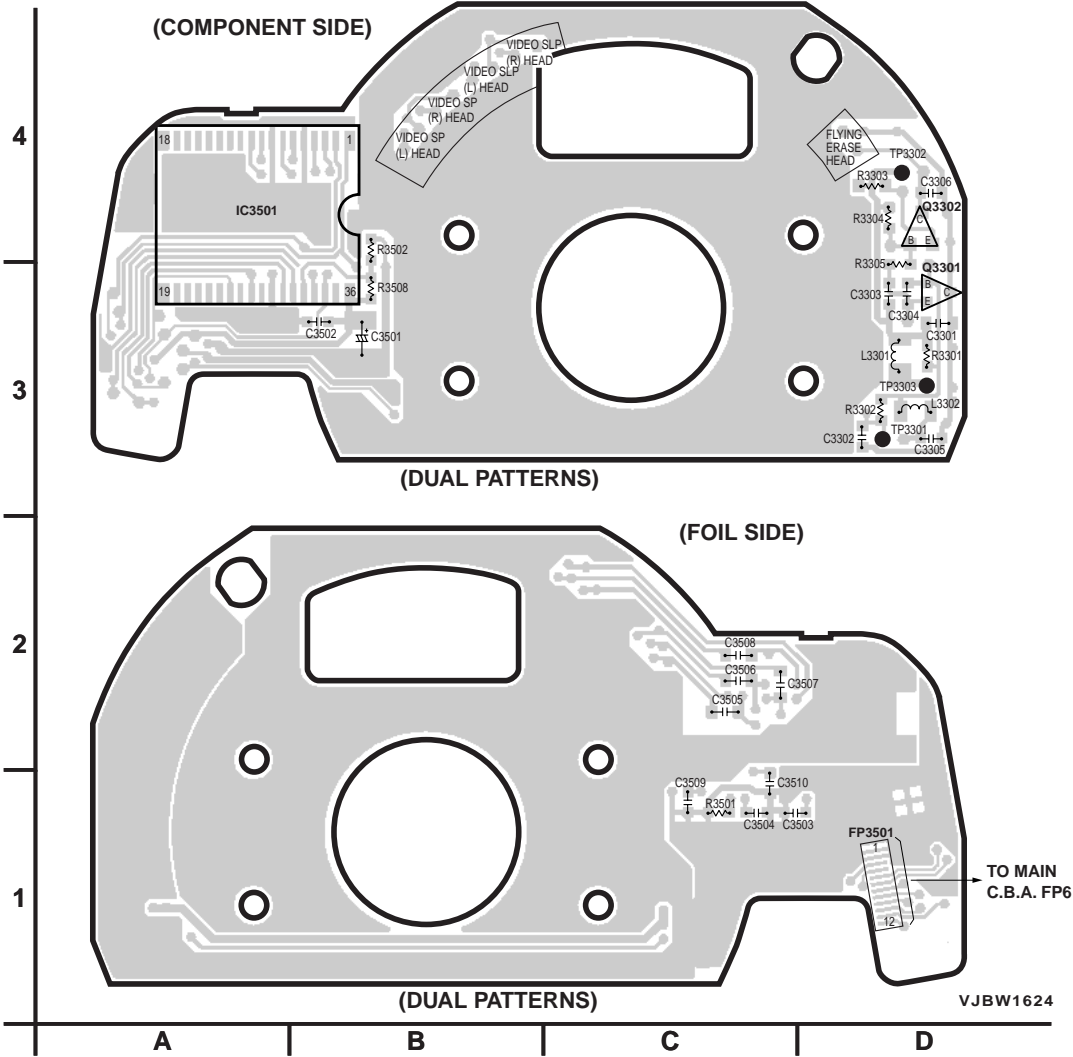
NOTE:
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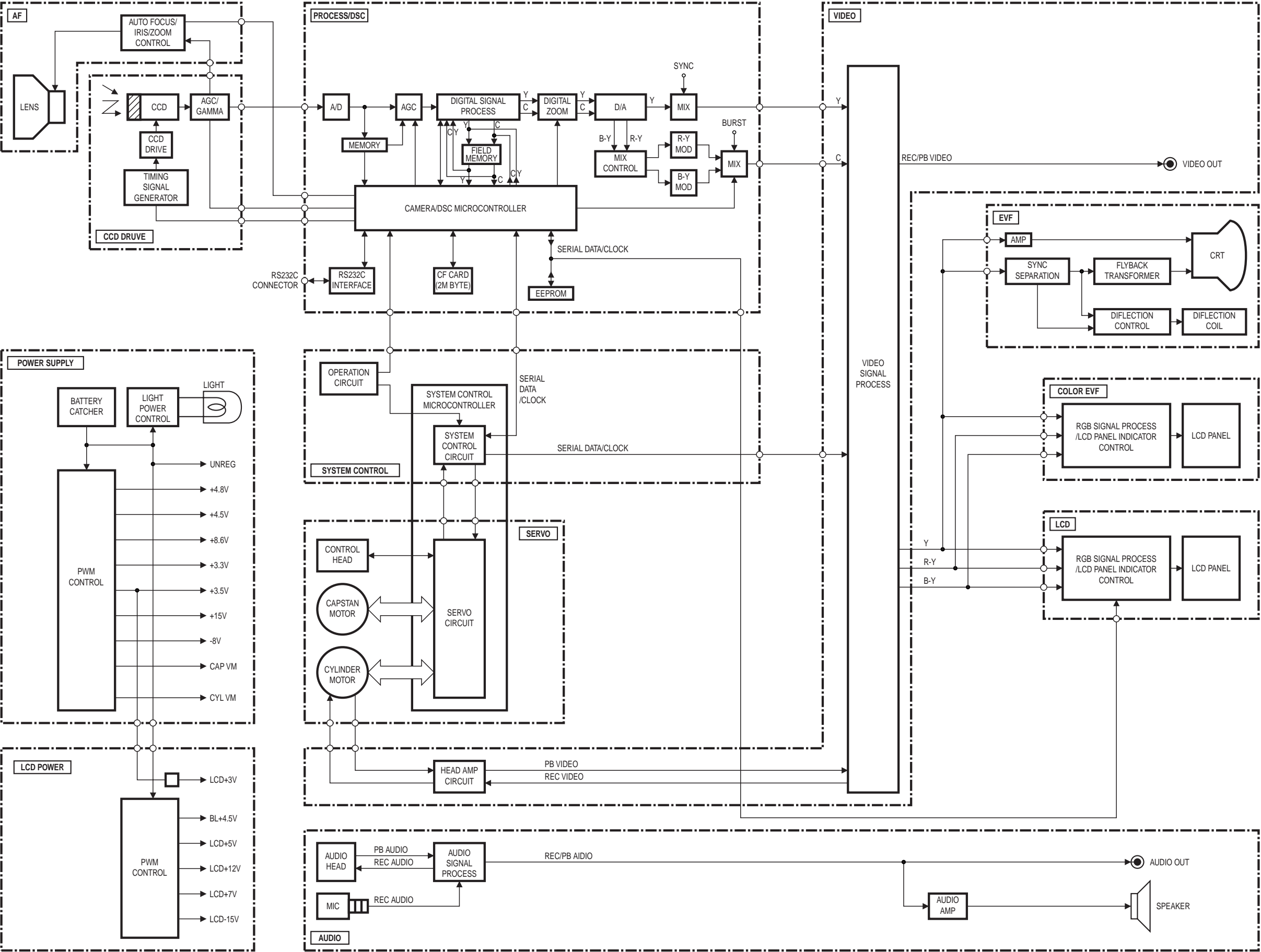
HEAD AMP C.B.A.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

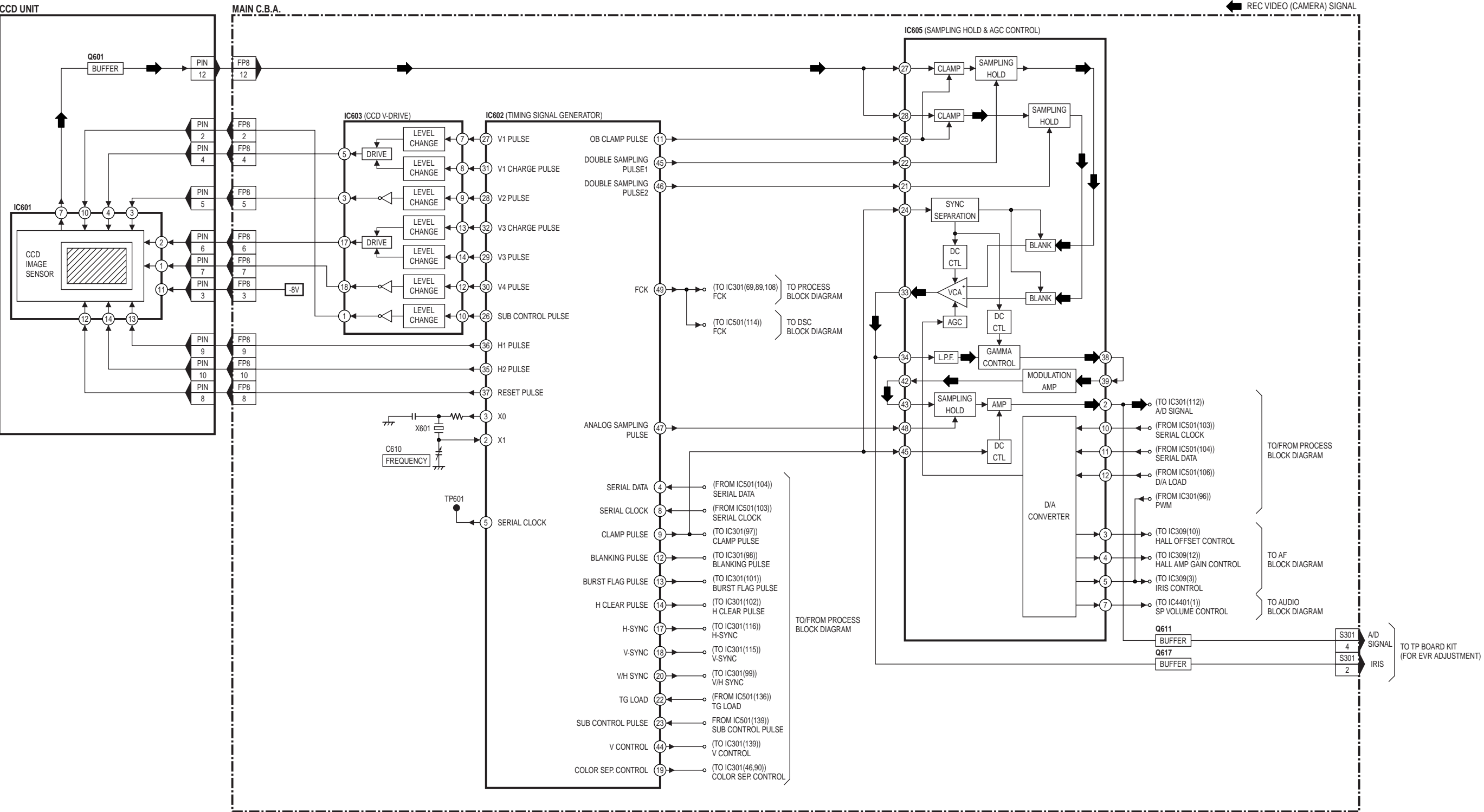
NOTE:
HEAD AMP C.B.A. WHICH IS LOCATED ON THE LOWER CYLINDER
IS SUPPLIED AS A CYLINDER UNIT ONLY.
HOWEVER, IC3501 (AN3365SB OR AN3368SB) IS AVAILABLE
SEPARATELY AS A REPLACEMENT PART.



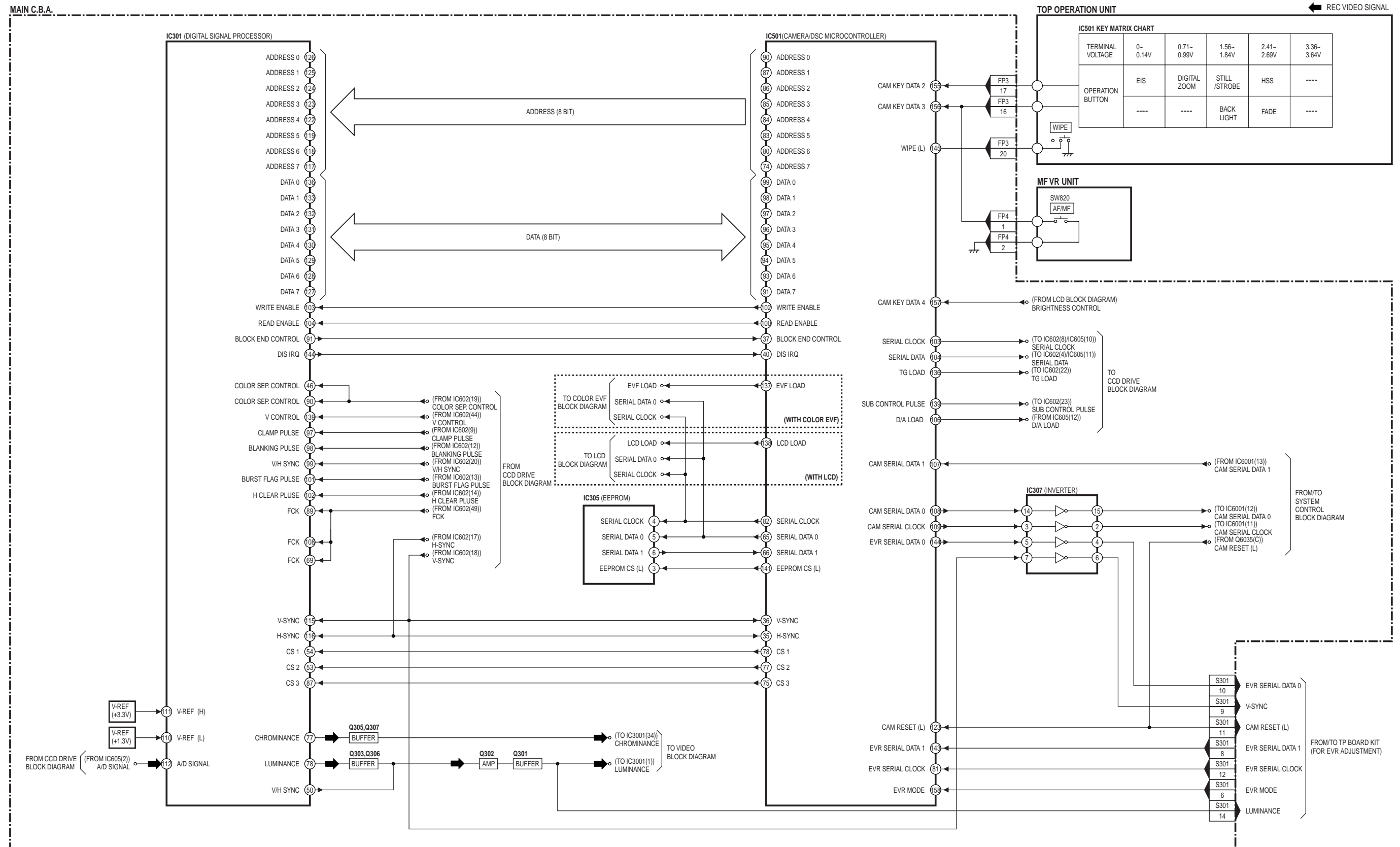
BLOCK DIAGRAMS
OVERALL BLOCK DIAGRAM



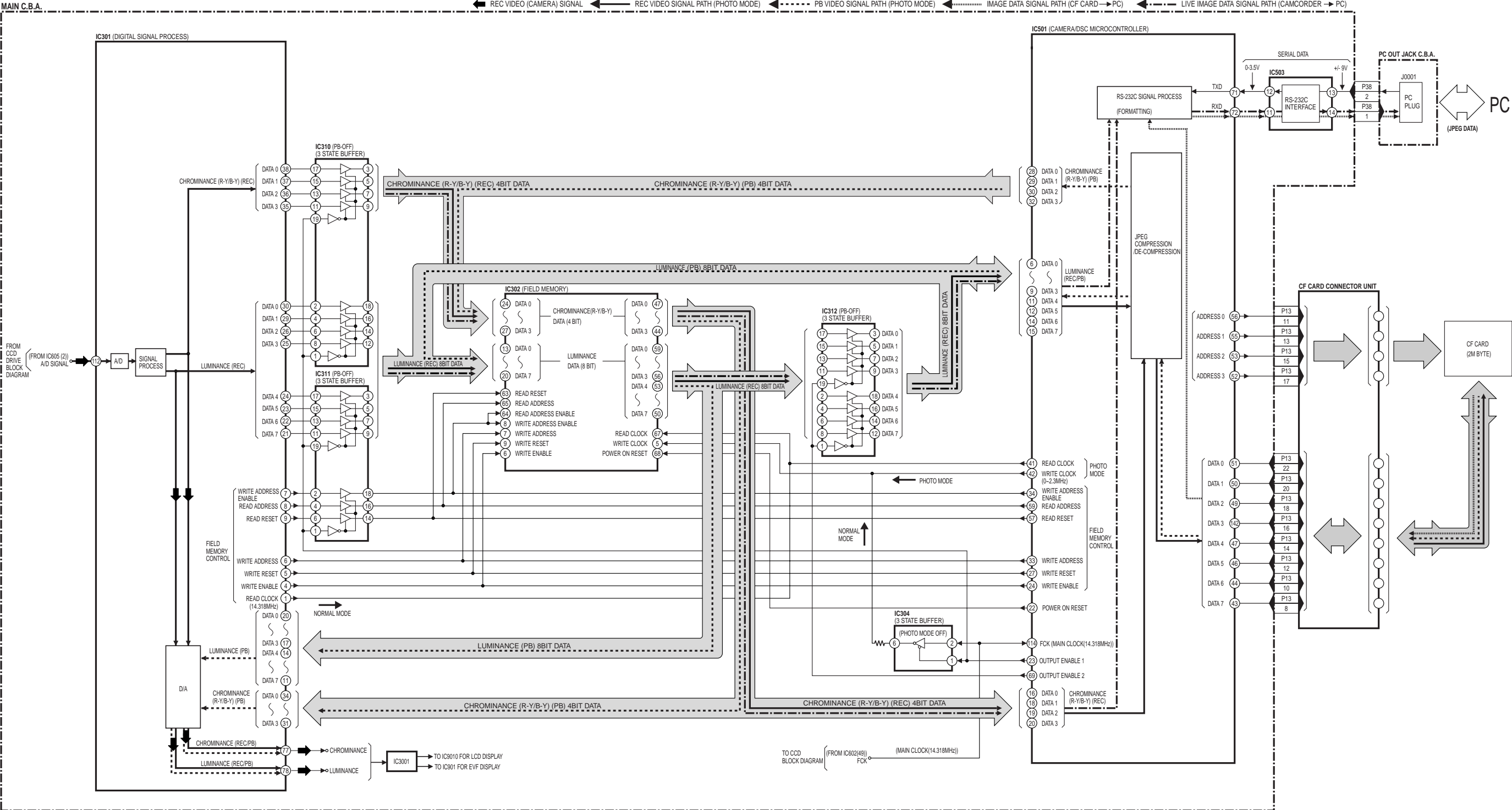
CCD BLOCK DIAGRAM



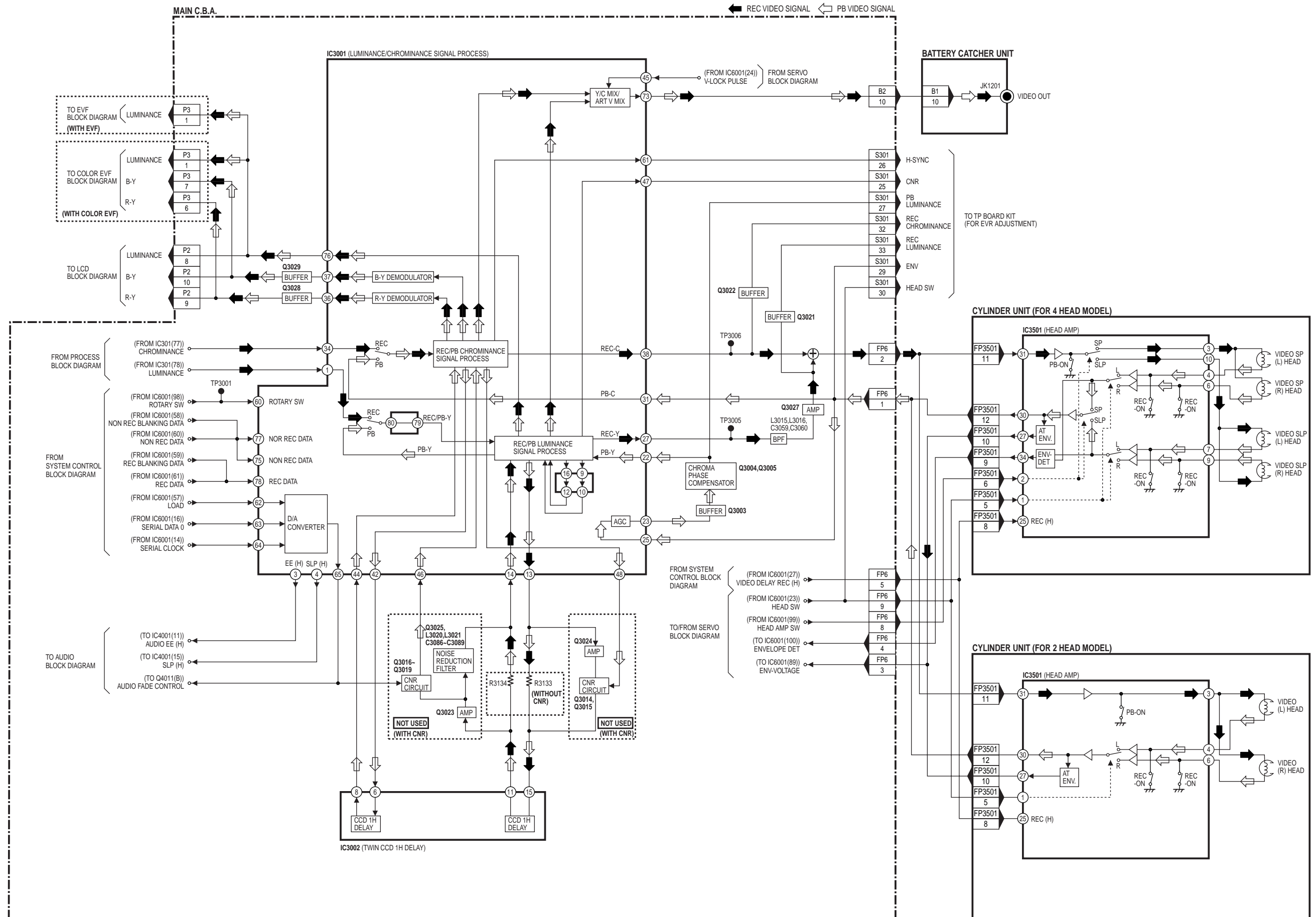
PROCESS BLOCK DIAGRAM



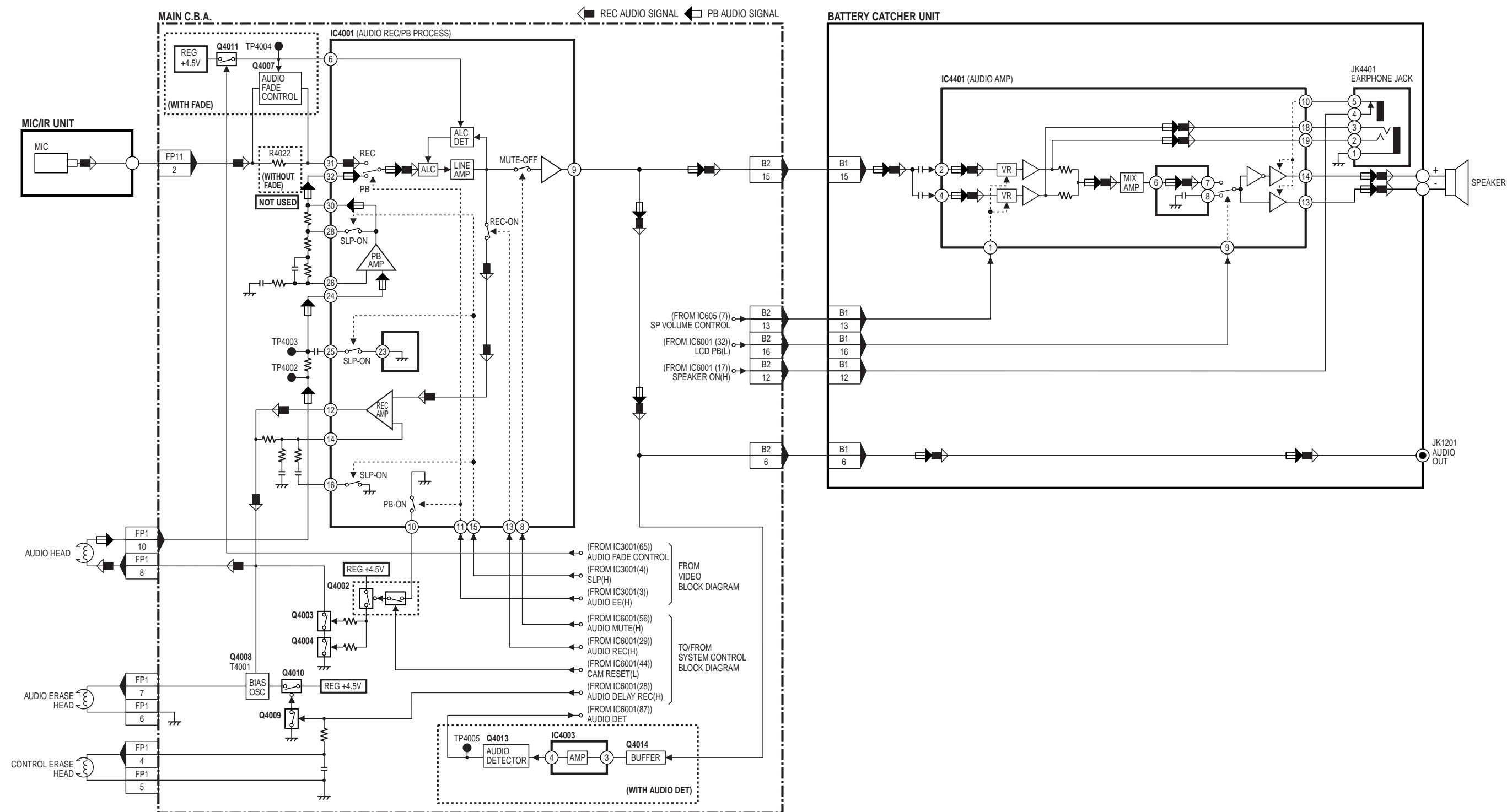
DSC BLOCK DIAGRAM



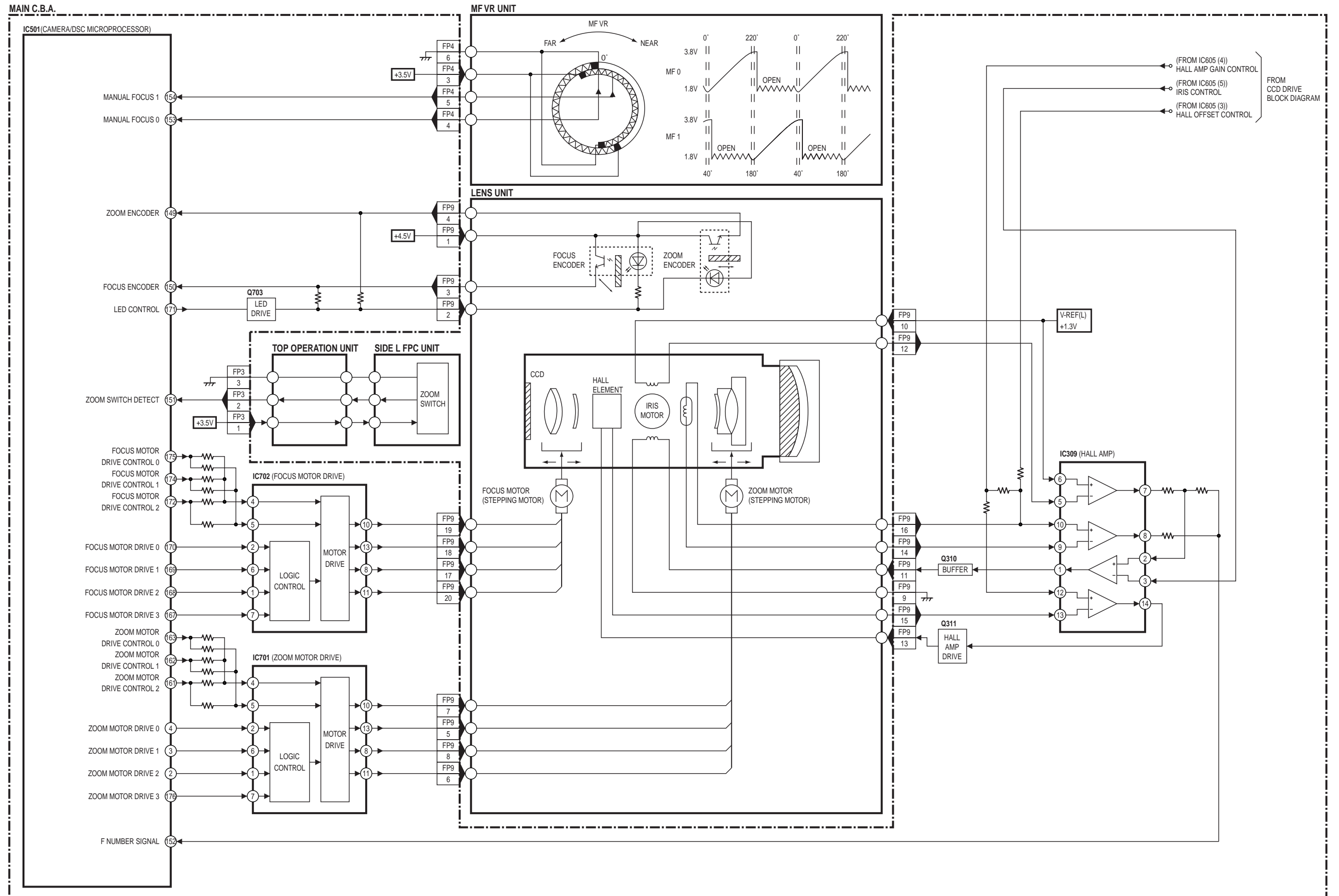
VIDEO BLOCK DIAGRAM



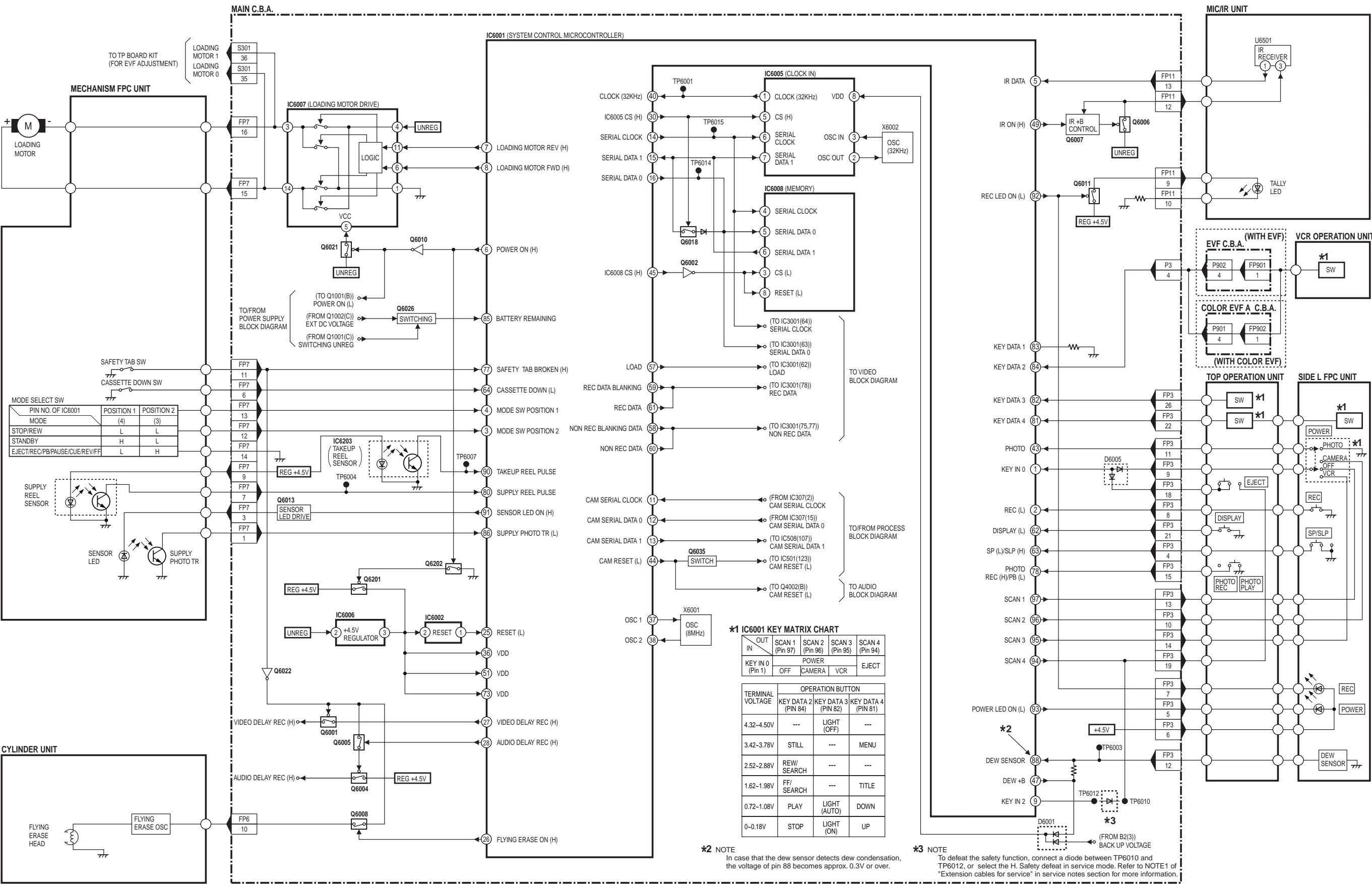
AUDIO BLOCK DIAGRAM



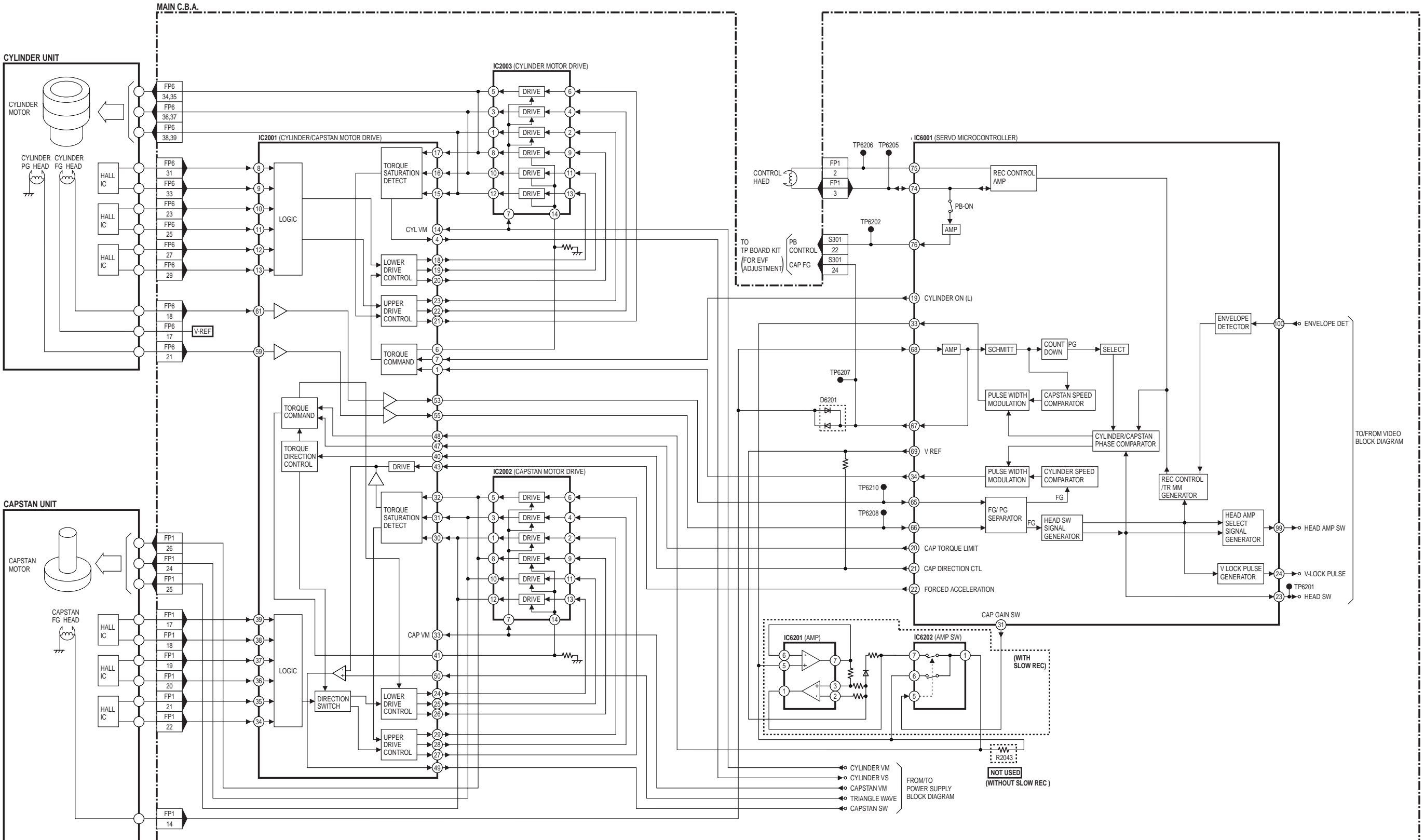
AF BLOCK DIAGRAM



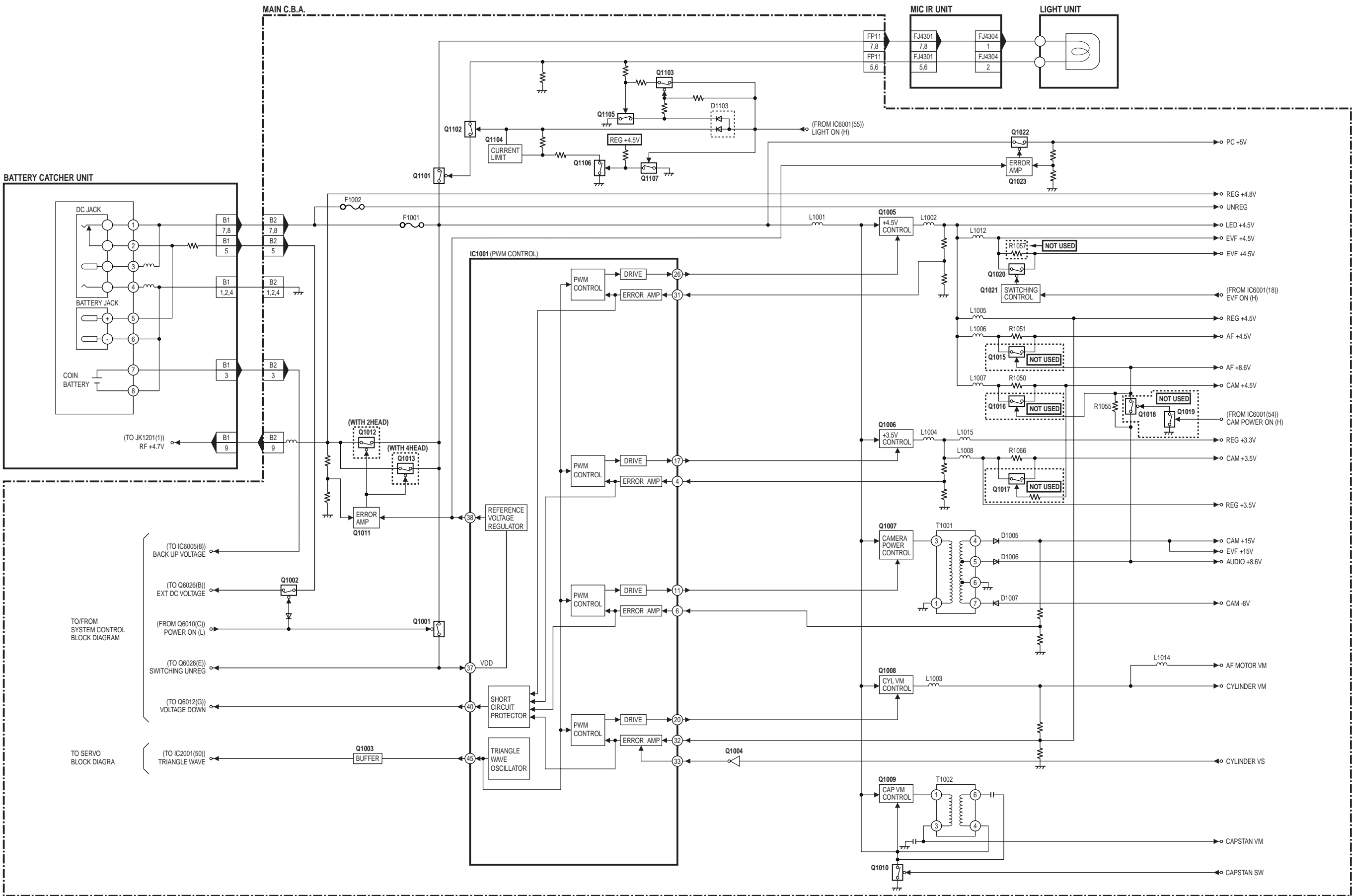
SYSTEM CONTROL BLOCK DIAGRAM



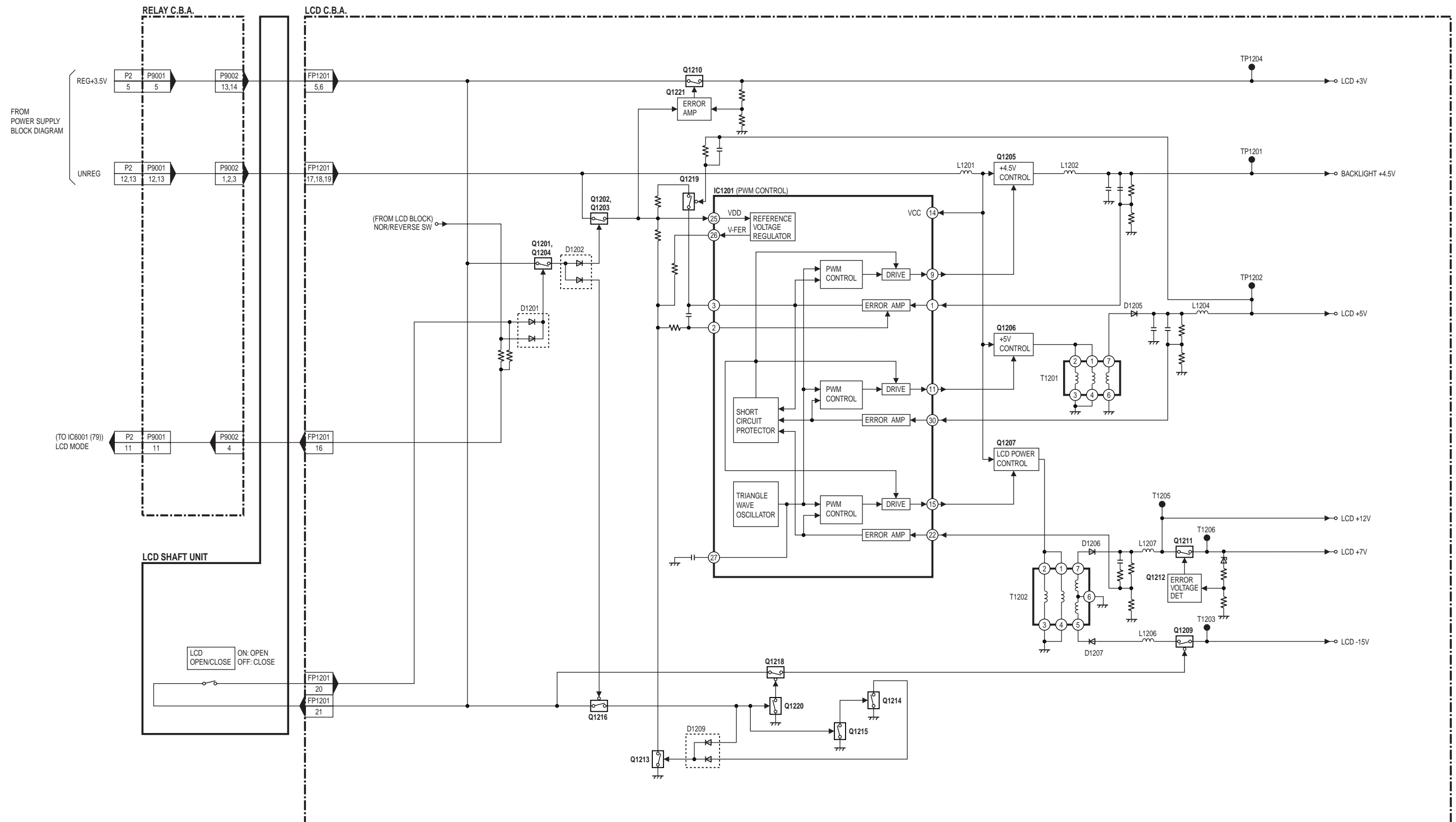
SERVO BLOCK DIAGRAM



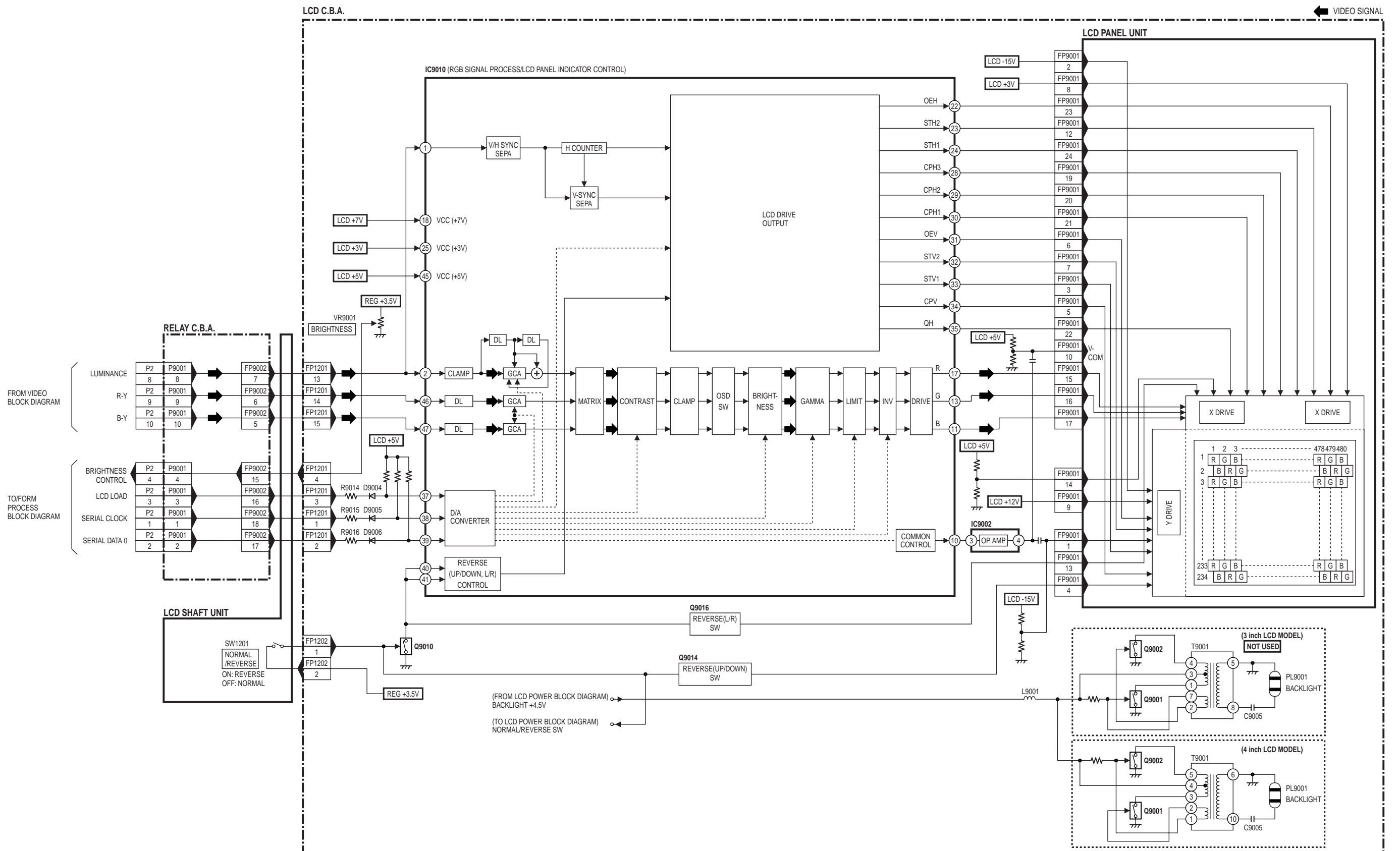
POWER SUPPLY BLOCK DIAGRAM



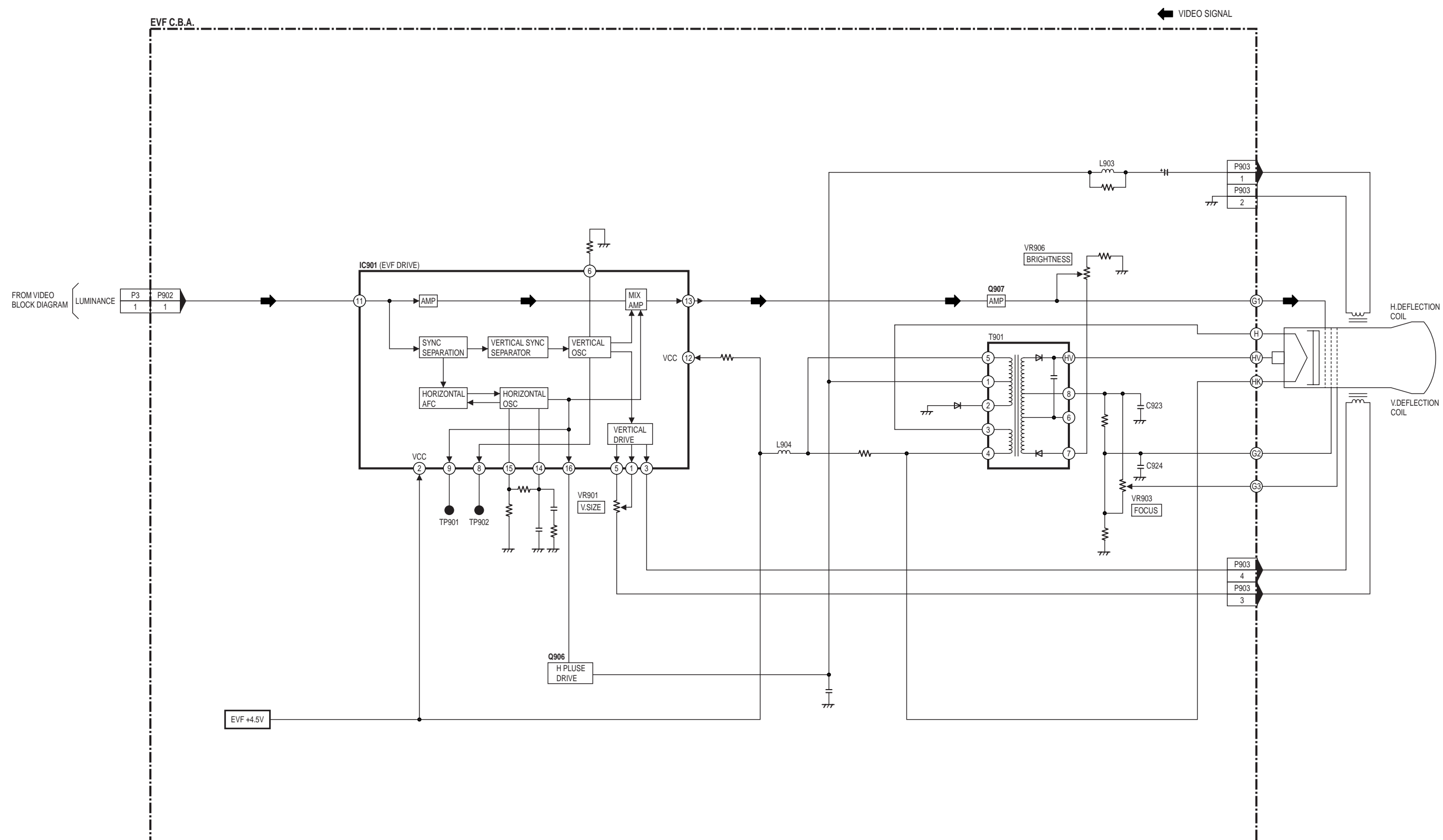
LCD POWER BLOCK DIAGRAM



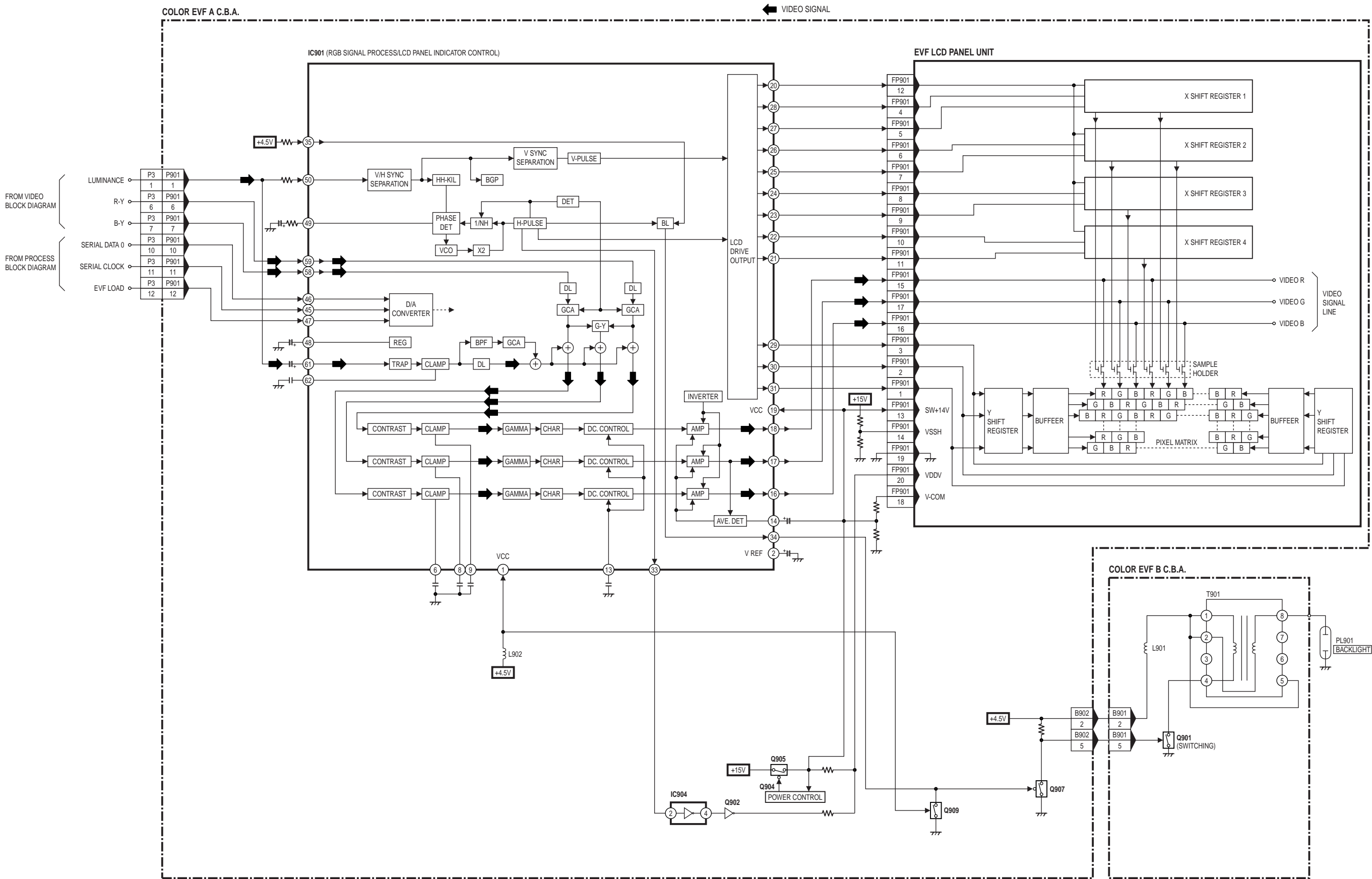
LCD BLOCK DIAGRAM



EVF BLOCK DIAGRAM



COLOR EVF BLOCK DIAGRAM



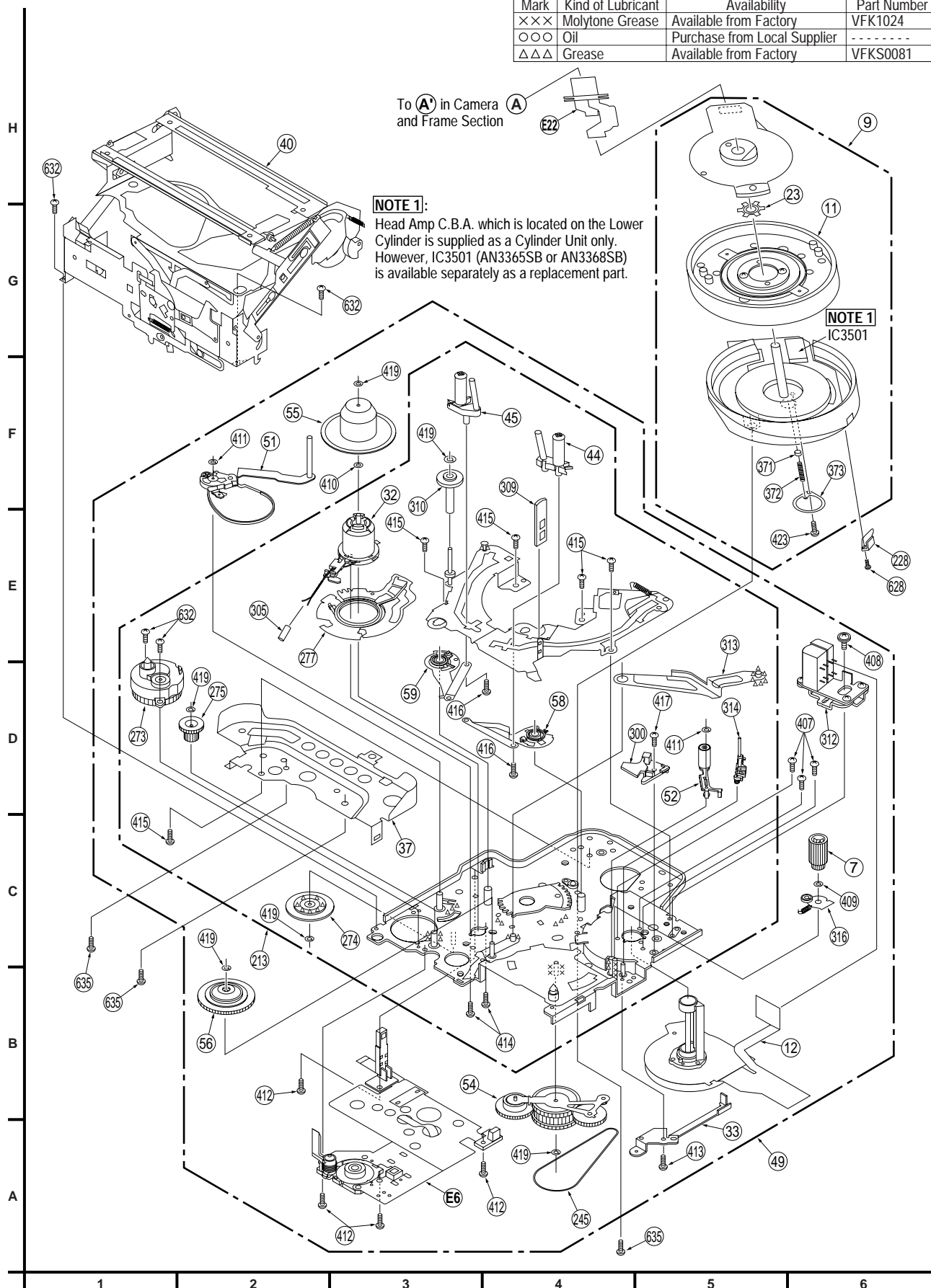
EXPLODED VIEWS

1 VCR MECHANISM SECTION

LUBRICATION POINTS

When the marked parts are replaced, apply the recommended lubricants or adhesive for better maintenance of the unit.

Mark	Kind of Lubricant	Availability	Part Number
×××	Molytone Grease	Available from Factory	VFK1024
○○○	Oil	Purchase from Local Supplier	-----
△△△	Grease	Available from Factory	VFKS0081




2 CAMERA AND FRAME SECTION

NOTE 2:

If the Optical Filter(Ref. No. 16) is removed from the front of the CCD Unit, replace it with the thinnest layer of the filter facing toward the Lens Unit. Ensure that the Filter Rubber(Ref. No. 31) is mounted on the Optical Filter before installation of the Filter Rubber.

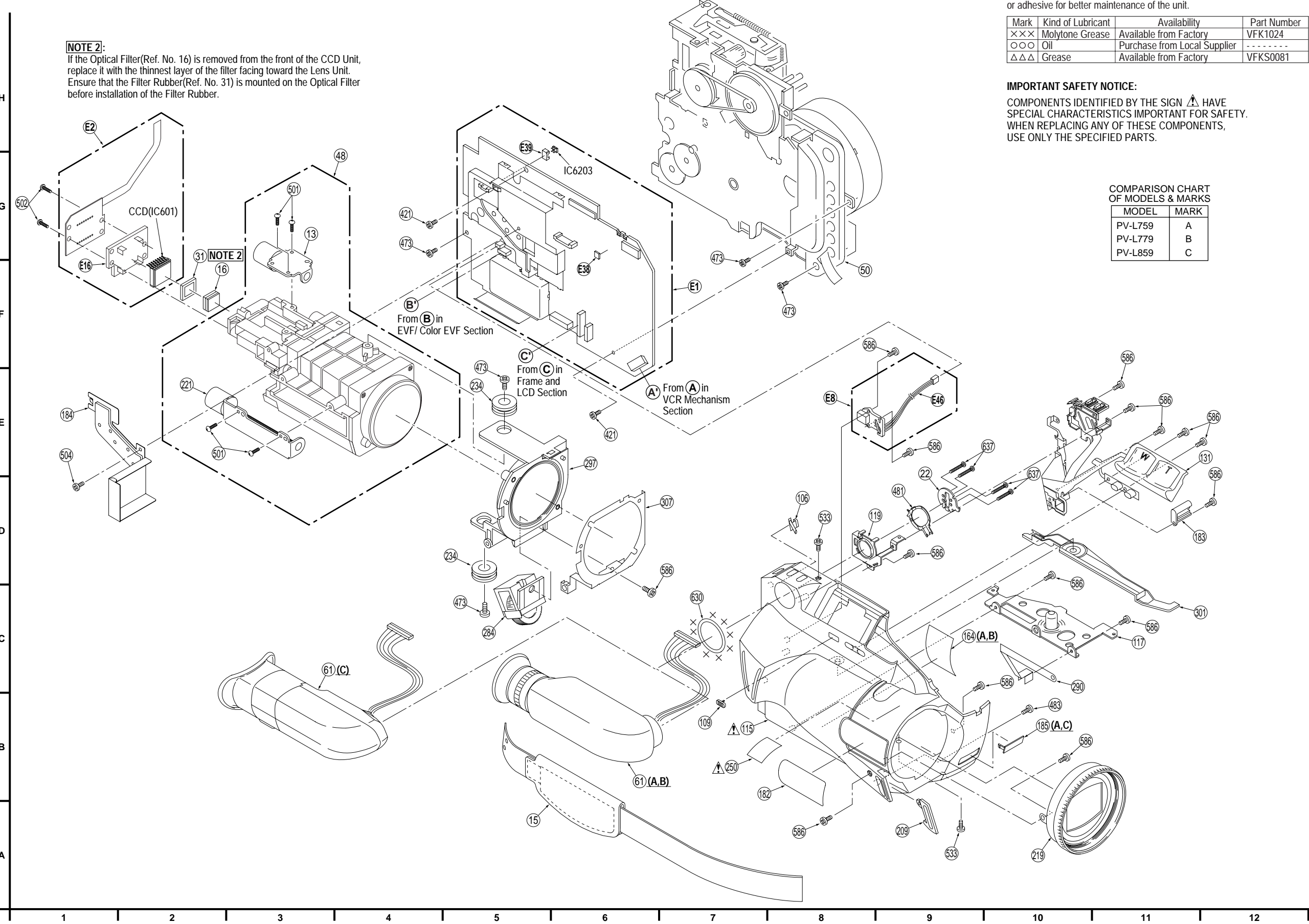
LUBRICATION POINTS
When the marked parts are replaced, apply the recommended lubricants or adhesive for better maintenance of the unit.

Mark	Kind of Lubricant	Availability	Part Number
×××	Molytone Grease	Available from Factory	VFK1024
○○○	Oil	Purchase from Local Supplier	-----
△△△	Grease	Available from Factory	VFKS0081


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

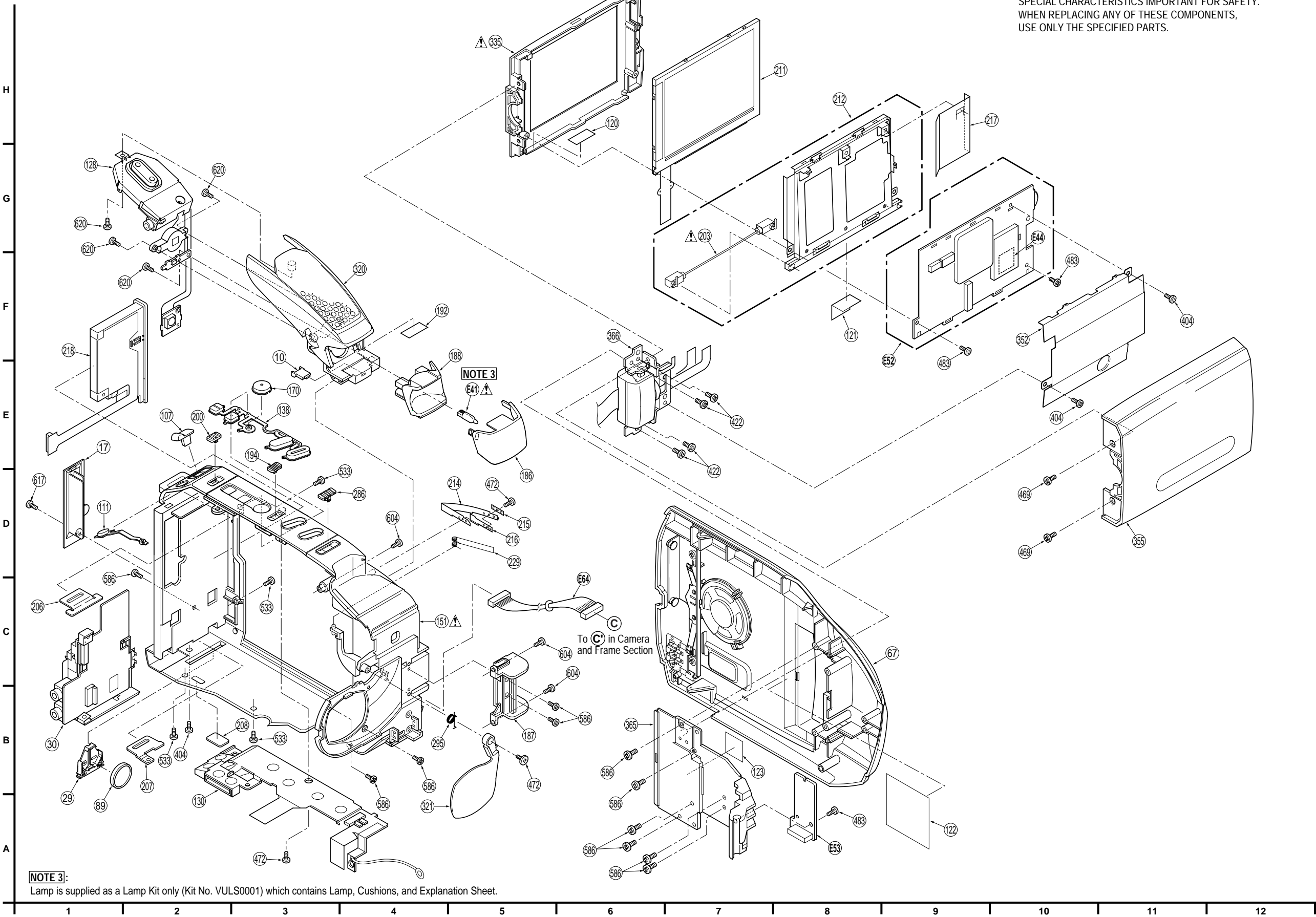
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C




3 FRAME AND LCD SECTION

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.



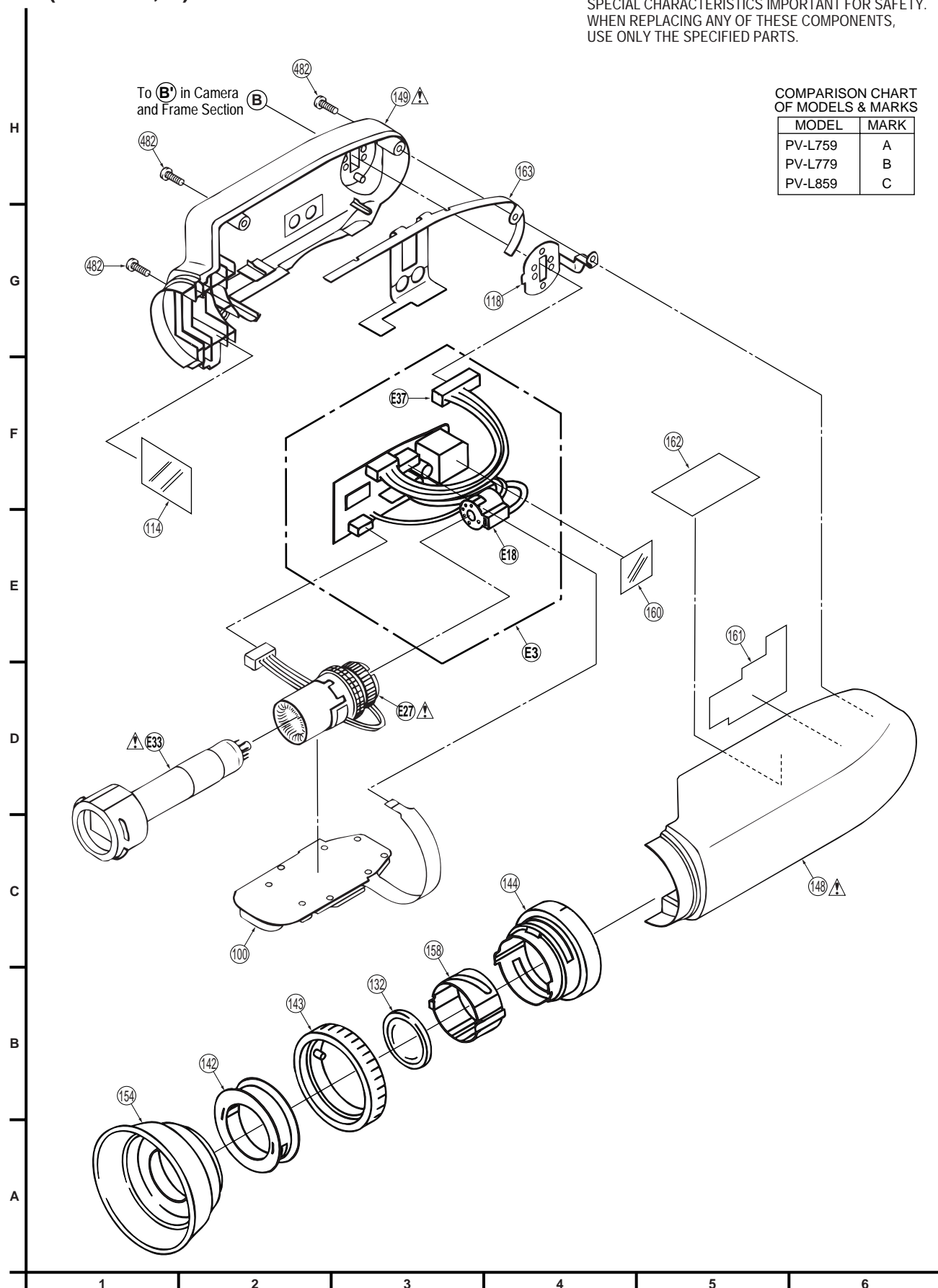
4 EVF SECTION (Model: A, B)

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.


COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C



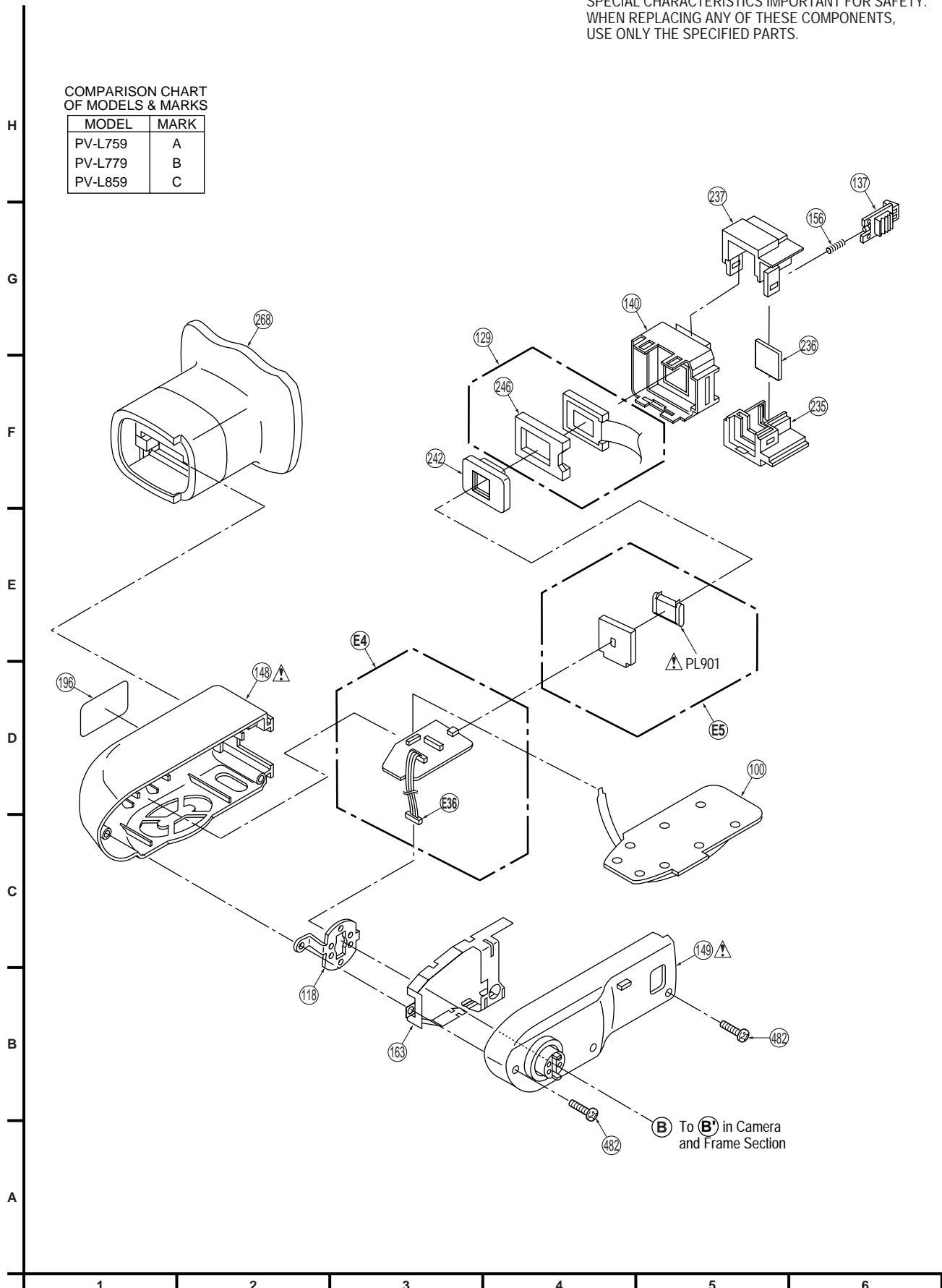
4 COLOR EVF SECTION (Model: C)

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L759	A
PV-L779	B
PV-L859	C



5 PACKING PARTS AND ACCESSORIES SECTION

